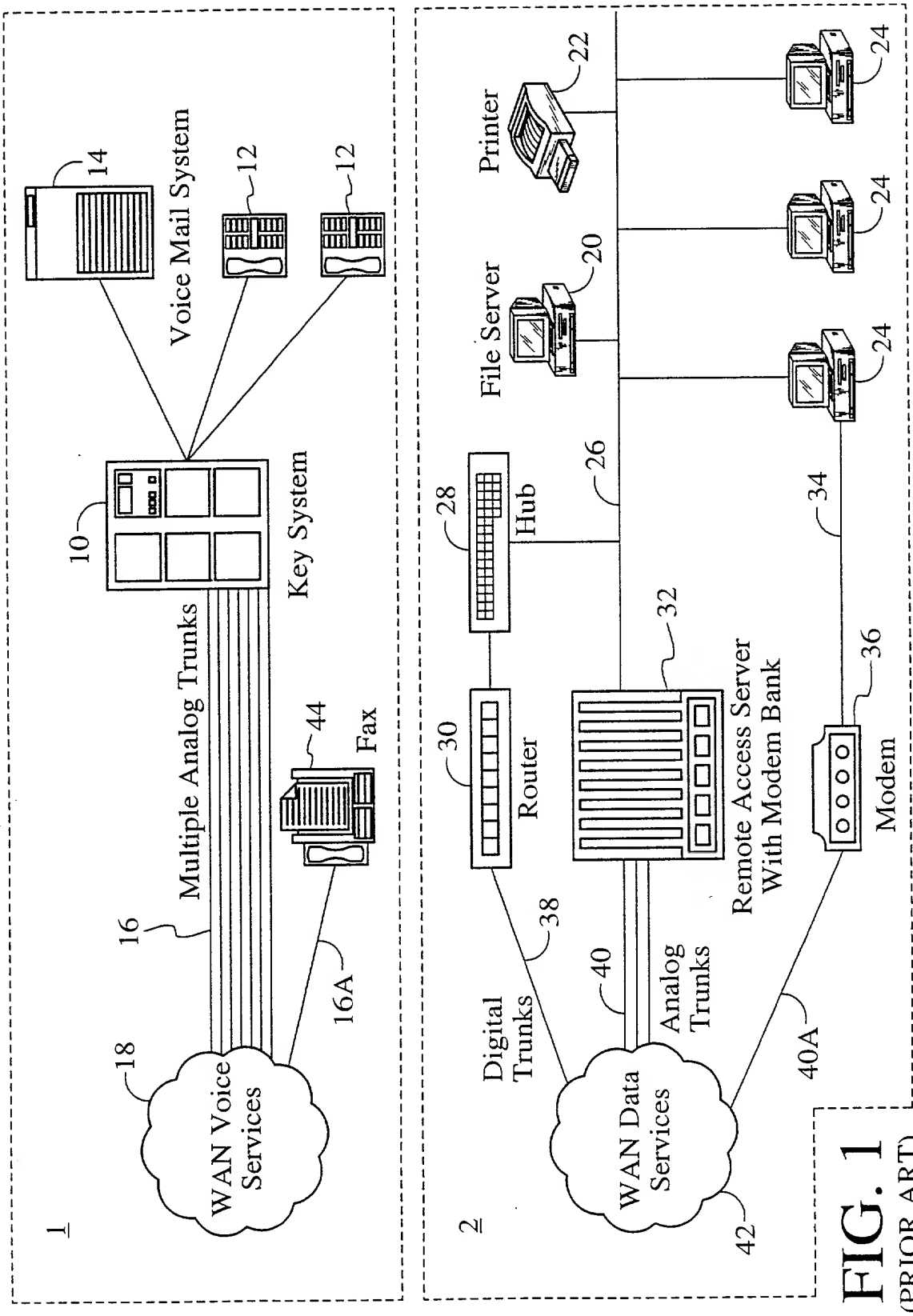


FIG. 1
(PRIOR ART)

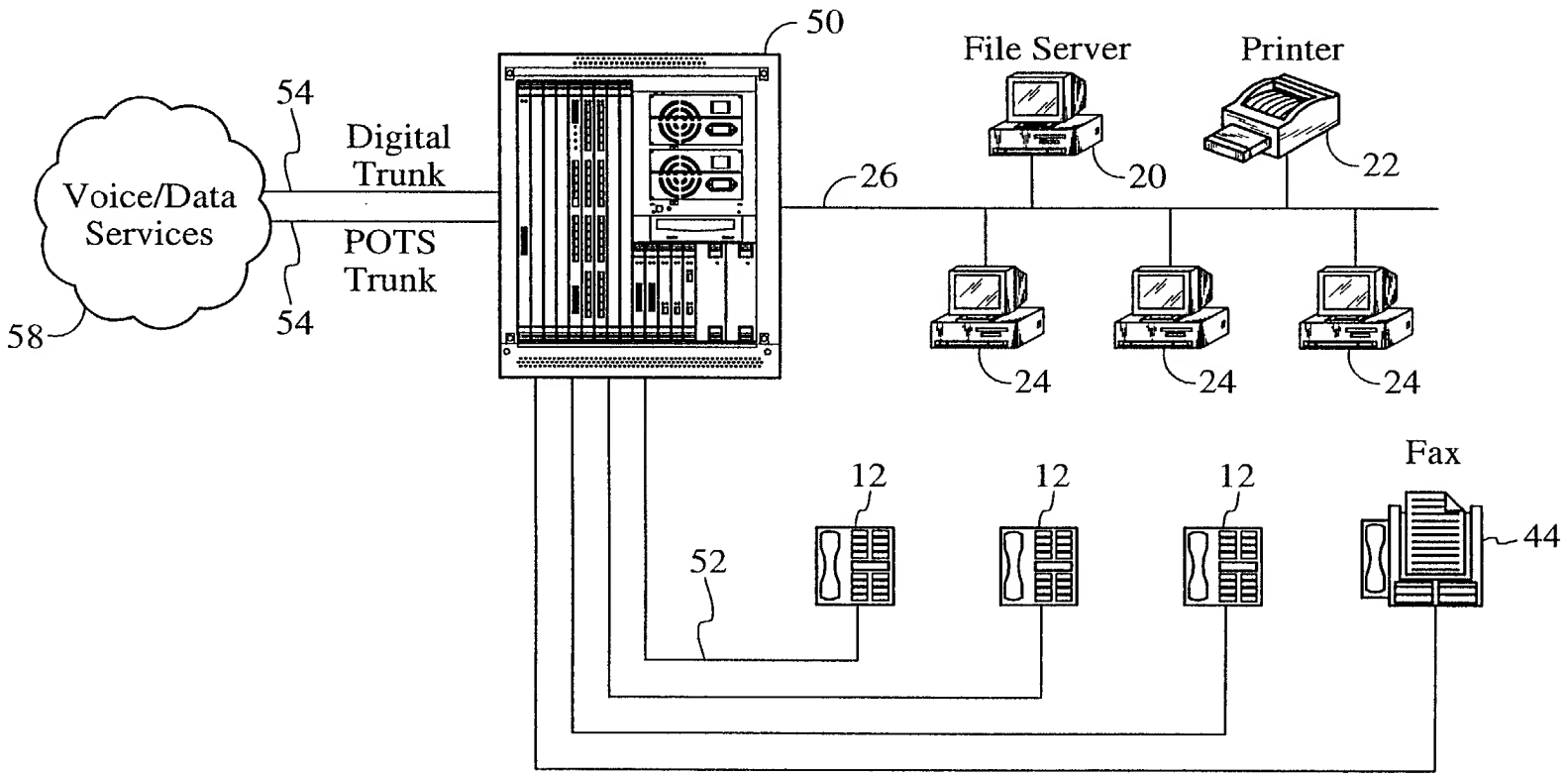
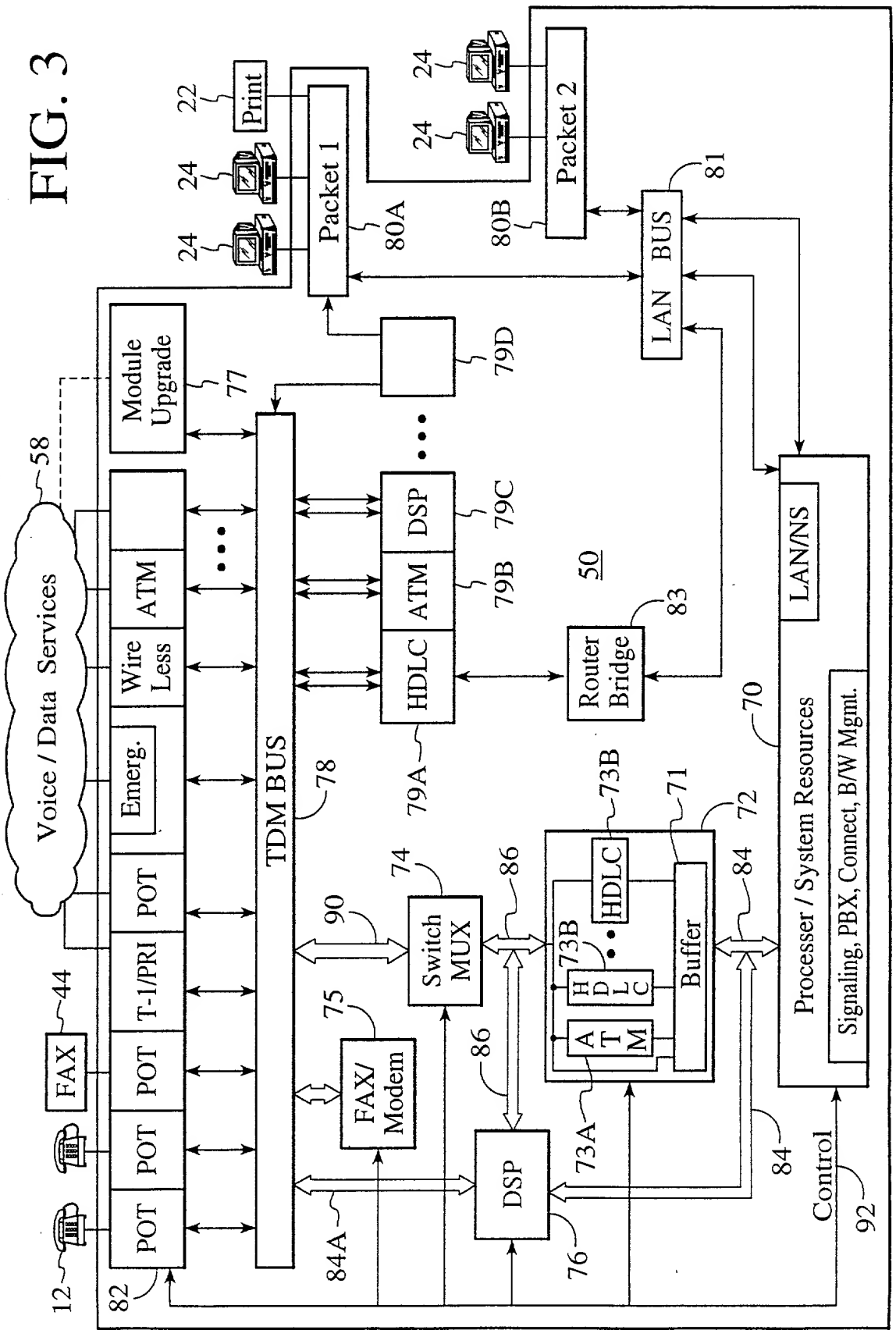

50
File Server
Printer
54
Digital
Trunk
Voice/Data
Services
POTS
Trunk
54
58
26
20
22
24
24
24
12
12
12
Fax
52
44

FIG. 2

FIG. 3


Voice / Data Services
58
POT
POT
POT
FAX
12
82
44
T-1/PRI
POT
Emerg.
Wire Less
ATM
Module Upgrade
77
TDM BUS
78
84A
FAX/ Modem
75
Switch MUX
74
90
86
DSP
76
73A
ATM
HDLC
73B
Buffer
71
72
84
HDLC
ATM
DSP
79A
79B
79C
79D
Router Bridge
83
50
Packet 1
80A
Packet 2
80B
LAN BUS
81
Print
22
24
24
24
24
LAN/NS
Processer / System Resources
70
Signaling, PBX, Connect, B/W Mgmt.
Control
92

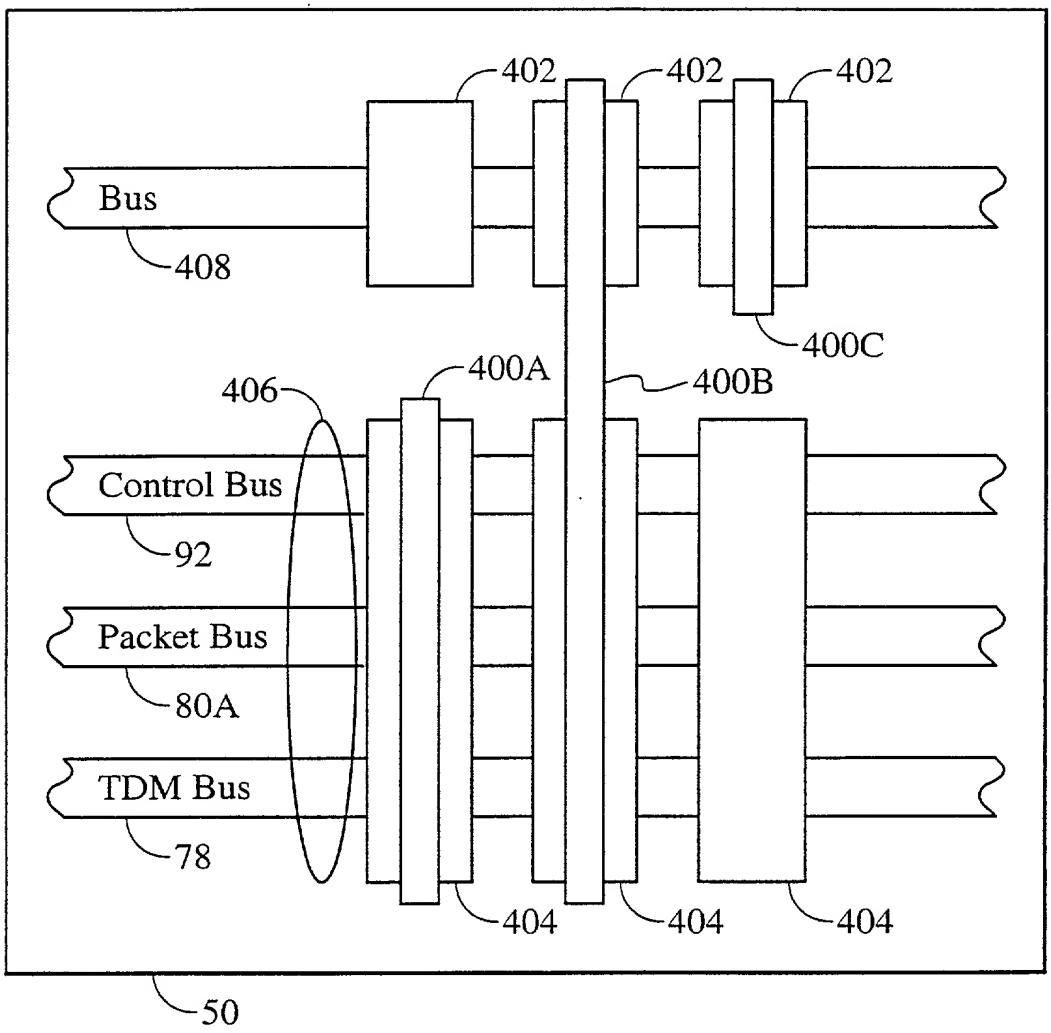

402
402
402
Bus
408
400C
406
400A
400B
Control Bus
92
Packet Bus
80A
TDM Bus
78
404
404
404
50

FIG. 3A

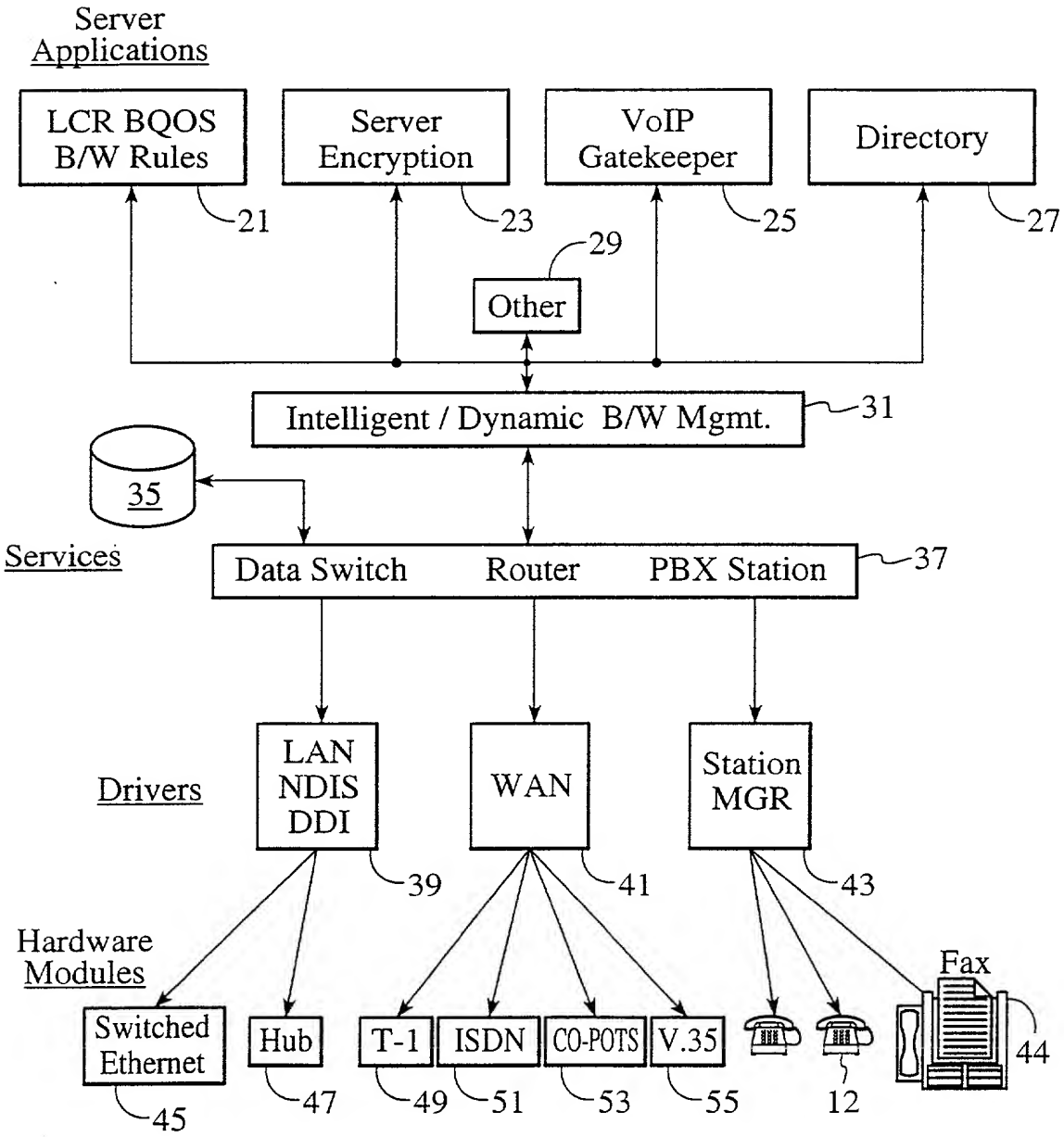

Server Applications
LCR BQOS B/W Rules
21
Server Encryption
23
VoIP Gatekeeper
25
Directory
27
29
Other
Intelligent / Dynamic B/W Mgmt.
31
35
Services
Data Switch
Router
PBX Station
37
Drivers
LAN NDIS DDI
39
WAN
41
Station MGR
43
Hardware Modules
Switched Ethernet
45
Hub
47
T-1
49
ISDN
51
CO-POTS
53
V.35
55
12
Fax
44

FIG. 4

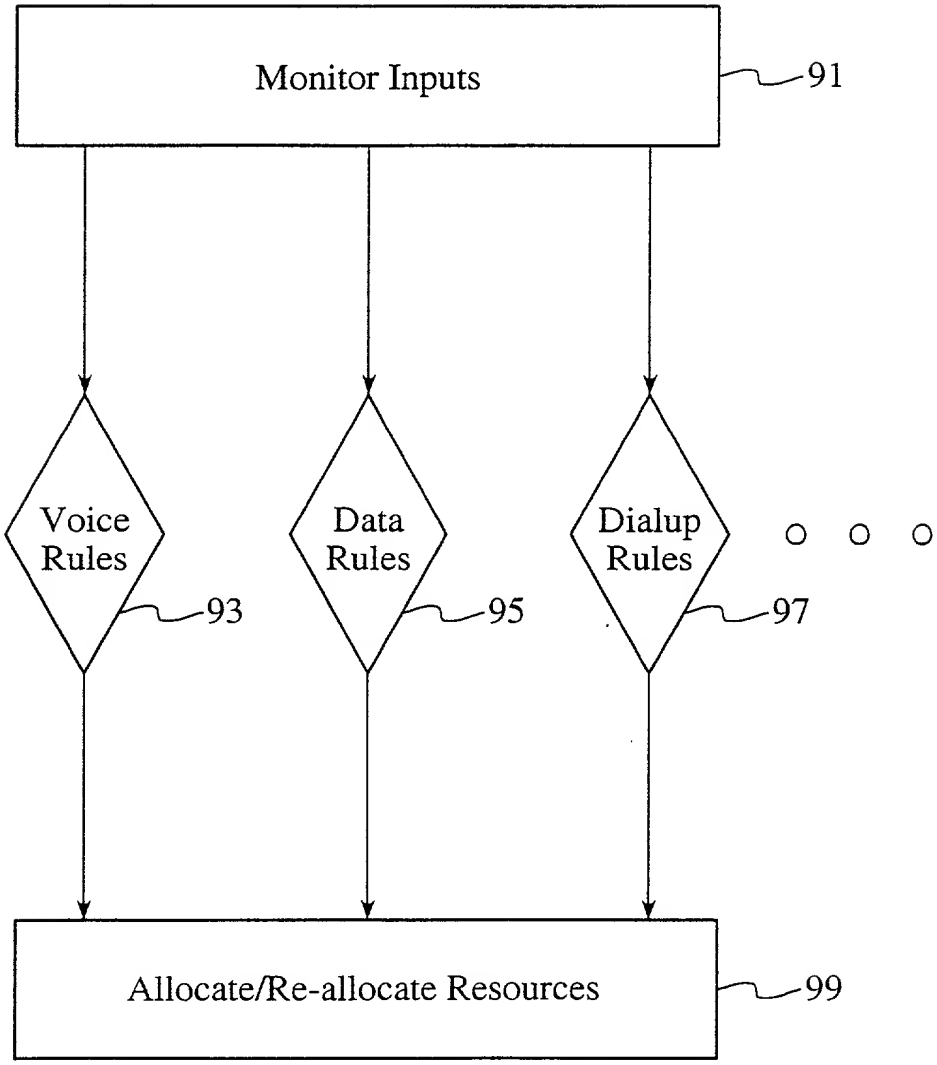

Monitor Inputs
91
Voice Rules
93
Data Rules
95
Dialup Rules
97
Allocate/Re-allocate Resources
99

FIG. 5

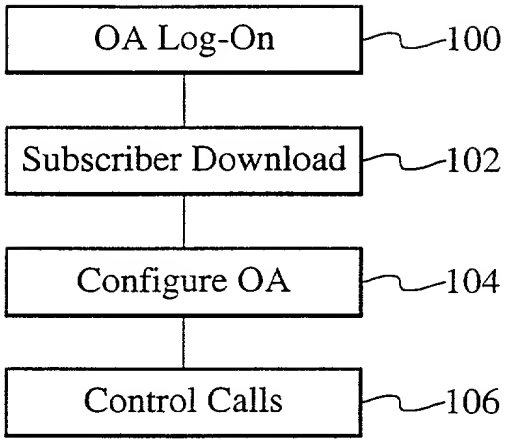

OA Log-On
100
Subscriber Download
102
Configure OA
104
Control Calls
106

FIG. 6

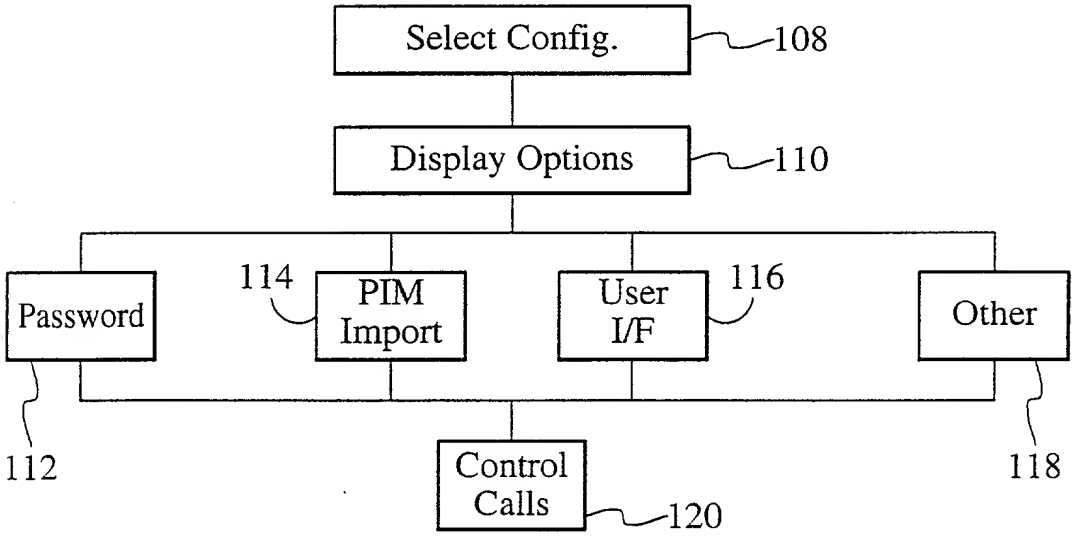

Select Config.
108
Display Options
110
Password
114
PIM Import
User I/F
116
Other
112
Control Calls
120
118

FIG. 7

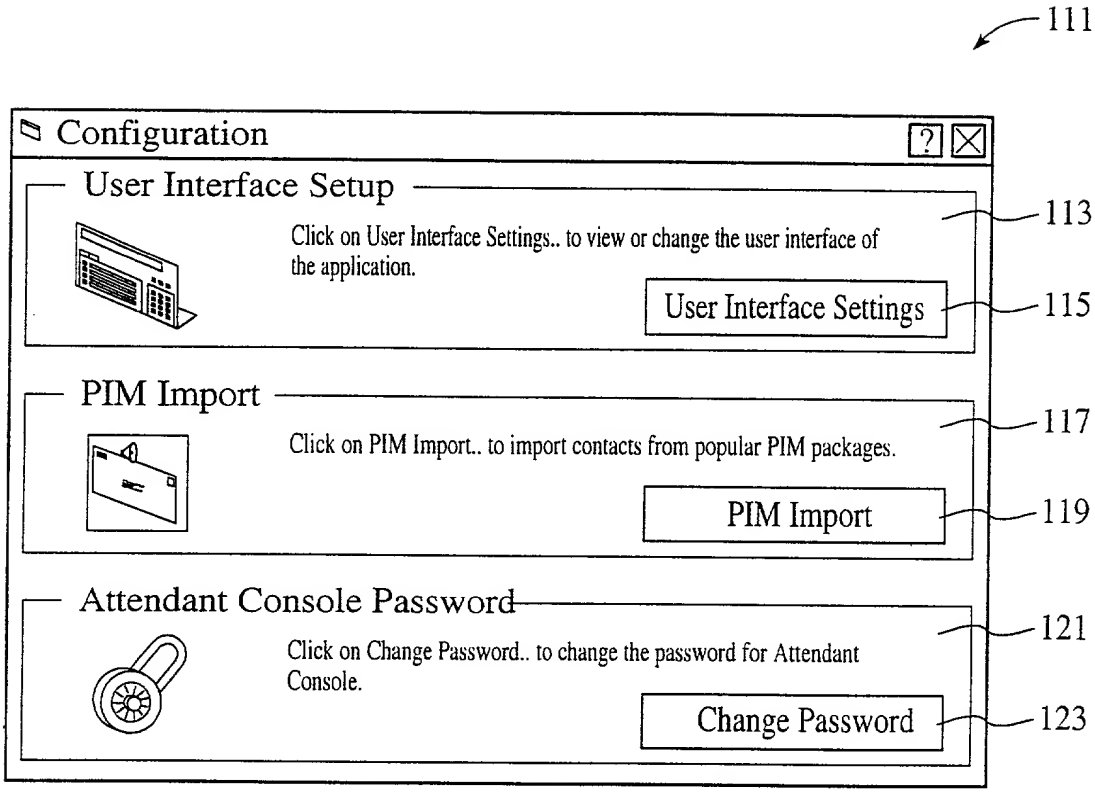

111
Configuration
User Interface Setup
Click on User Interface Settings.. to view or change the user interface of the application.
User Interface Settings
113
115
PIM Import
Click on PIM Import.. to import contacts from popular PIM packages.
PIM Import
117
119
Attendant Console Password
Click on Change Password.. to change the password for Attendant Console.
Change Password
121
123

FIG. 7A

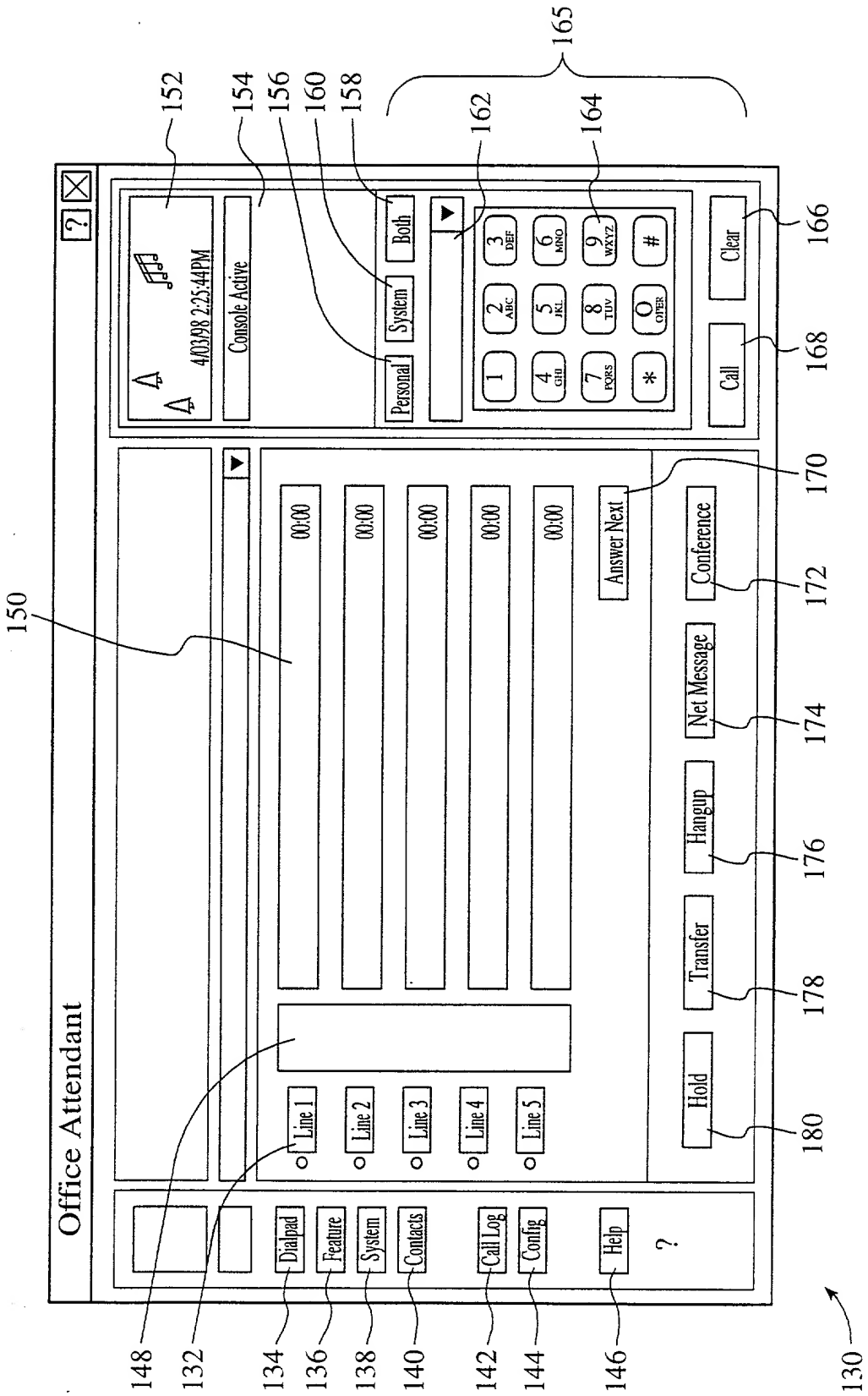

Office Attendant
4/03/98 2:25:44PM
Console Active
Personal
System
Both
Clear
Call
Answer Next
Conference
Net Message
Hangup
Transfer
Hold
Line 1
Line 2
Line 3
Line 4
Line 5
Dialpad
Feature
System
Contacts
Call Log
Config
Help
?
00:00
150
148
132
134
136
138
140
142
144
146
130
152
154
156
160
158
162
164
165
166
168
170
172
174
176
178
180

FIG. 8A

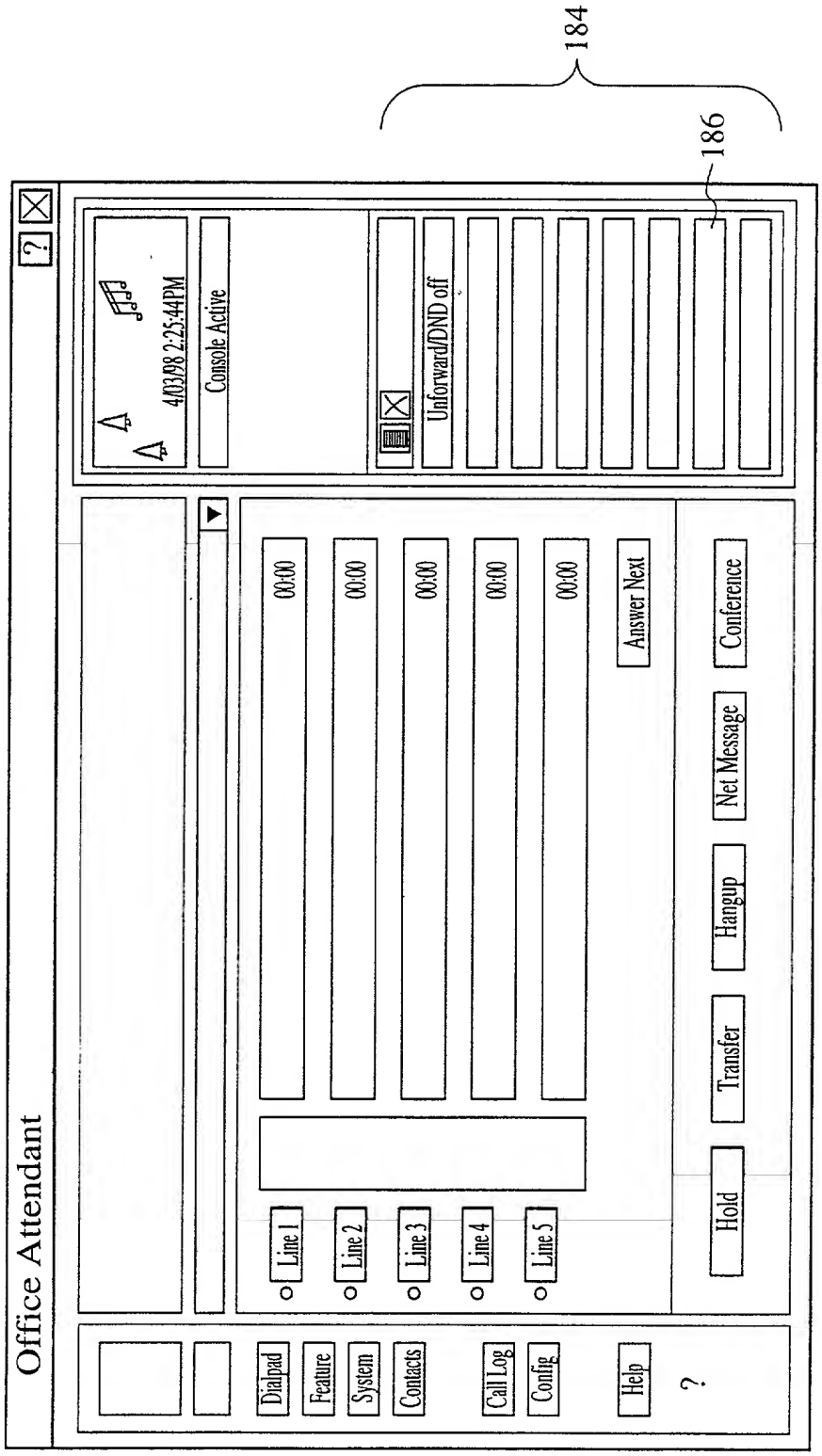

184
186
182
Office Attendant
4/03/08 2:25:44PM
Console Active
Unforward/DND off
Dialpad
Feature
System
Contacts
Call Log
Config
Help
?
Line 1
Line 2
Line 3
Line 4
Line 5
00:00
Answer Next
Hold
Transfer
Hangup
Net Message
Conference

FIG. 8B

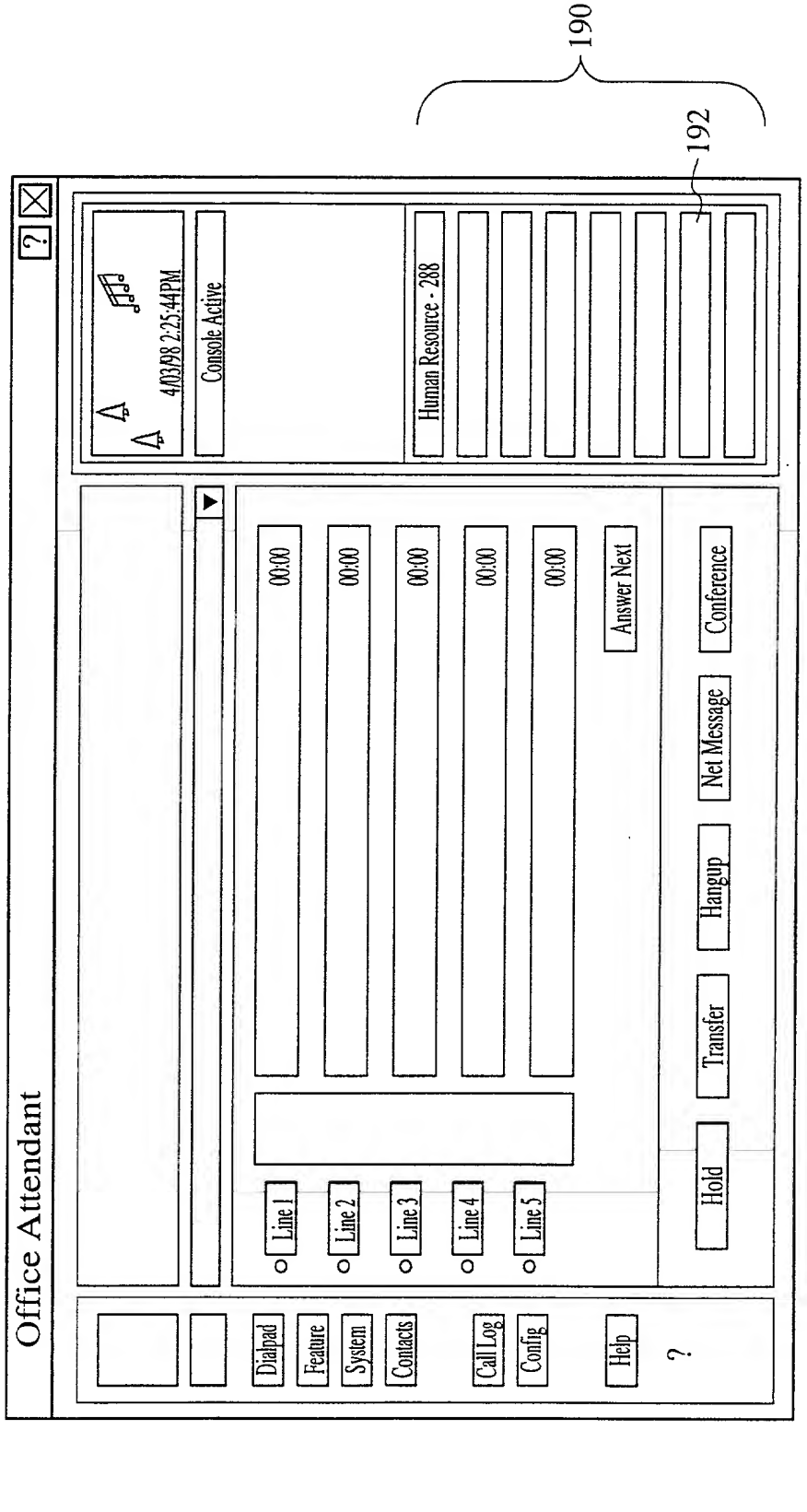

190
192
188
Office Attendant
Dialpad
Feature
System
Contacts
Call Log
Config
Help
?
Line 1
Line 2
Line 3
Line 4
Line 5
00:00
Answer Next
Hold
Transfer
Hangup
Net Message
Conference
4/03/98 2:25:44PM
Console Active
Human Resource - 288

FIG. 8C

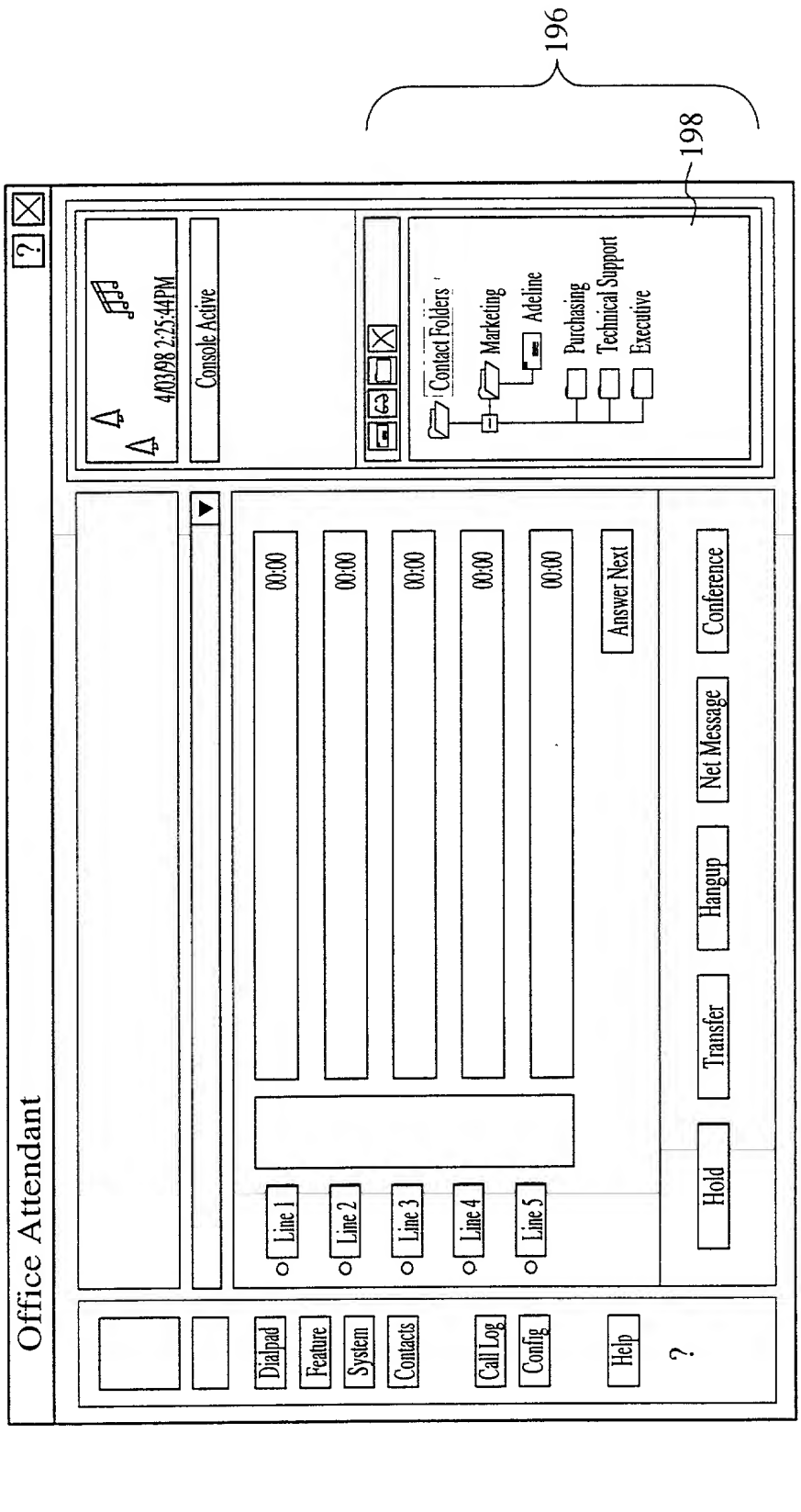

196
198
194
Office Attendant
4/03/98 2:25:44PM
Console Active
Contact Folders
Marketing
Adeline
Purchasing
Technical Support
Executive
Dialpad
Feature
System
Contacts
Call Log
Config
Help
?
Line 1
Line 2
Line 3
Line 4
Line 5
00:00
00:00
00:00
00:00
00:00
Answer Next
Hold
Transfer
Hangup
Net Message
Conference

FIG. 8D

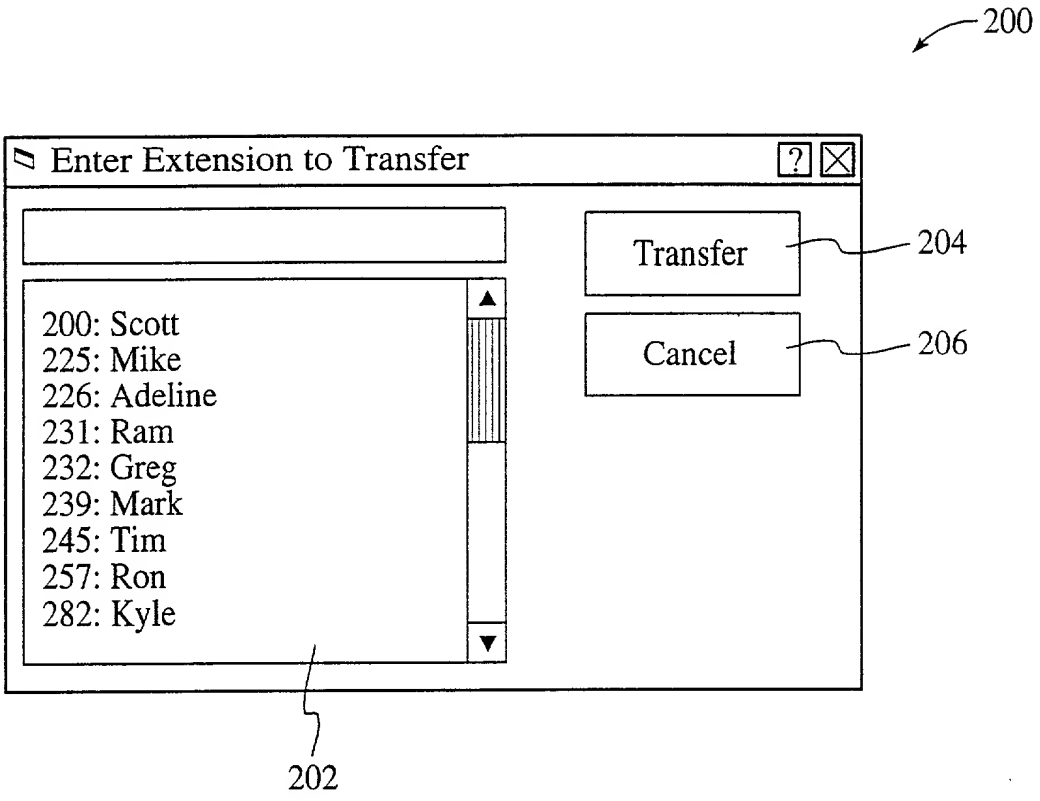

200
Enter Extension to Transfer
200: Scott
225: Mike
226: Adeline
231: Ram
232: Greg
239: Mark
245: Tim
257: Ron
282: Kyle
Transfer
204
Cancel
206
202

FIG. 9A

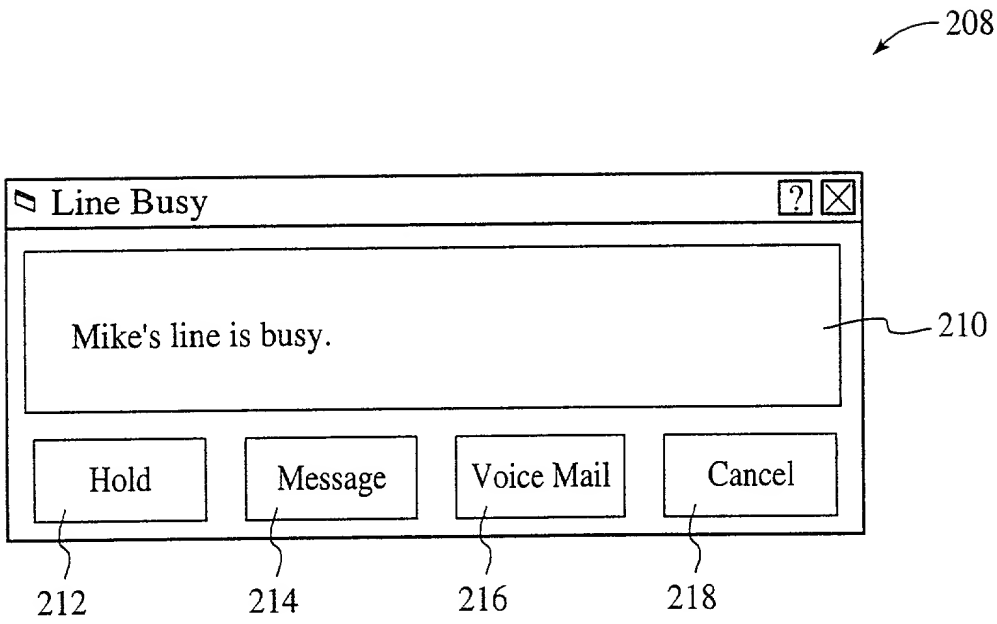

208
Line Busy
Mike's line is busy.
210
Hold
Message
Voice Mail
Cancel
212
214
216
218

FIG. 9B

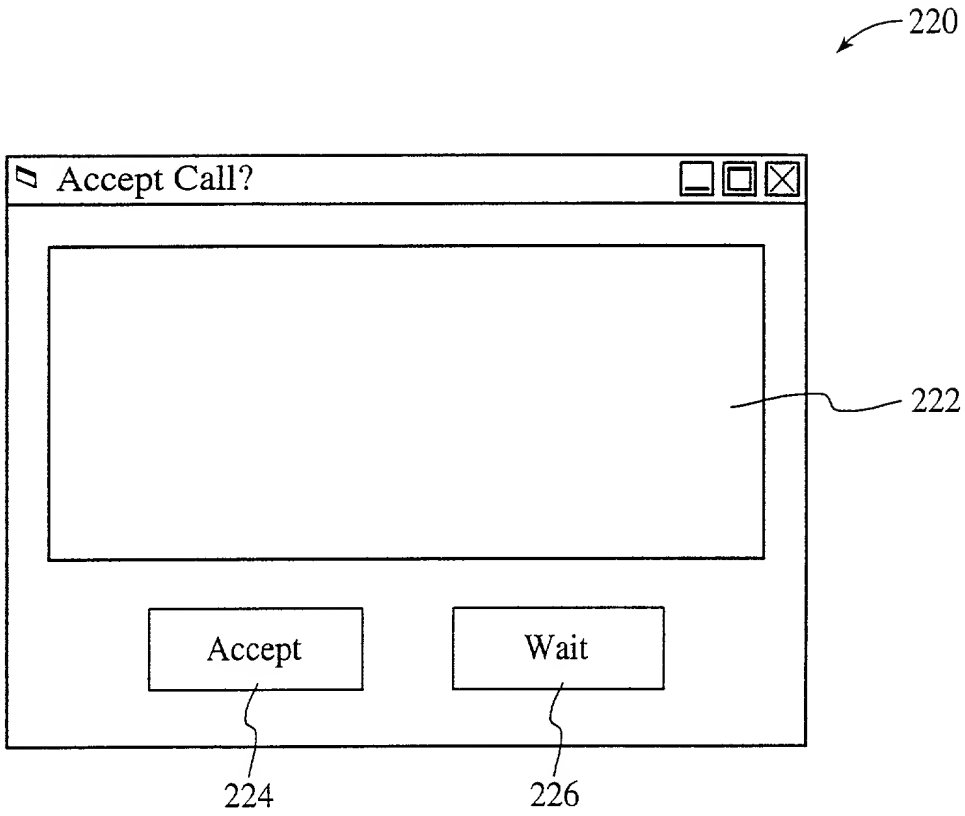


FIG. 9C

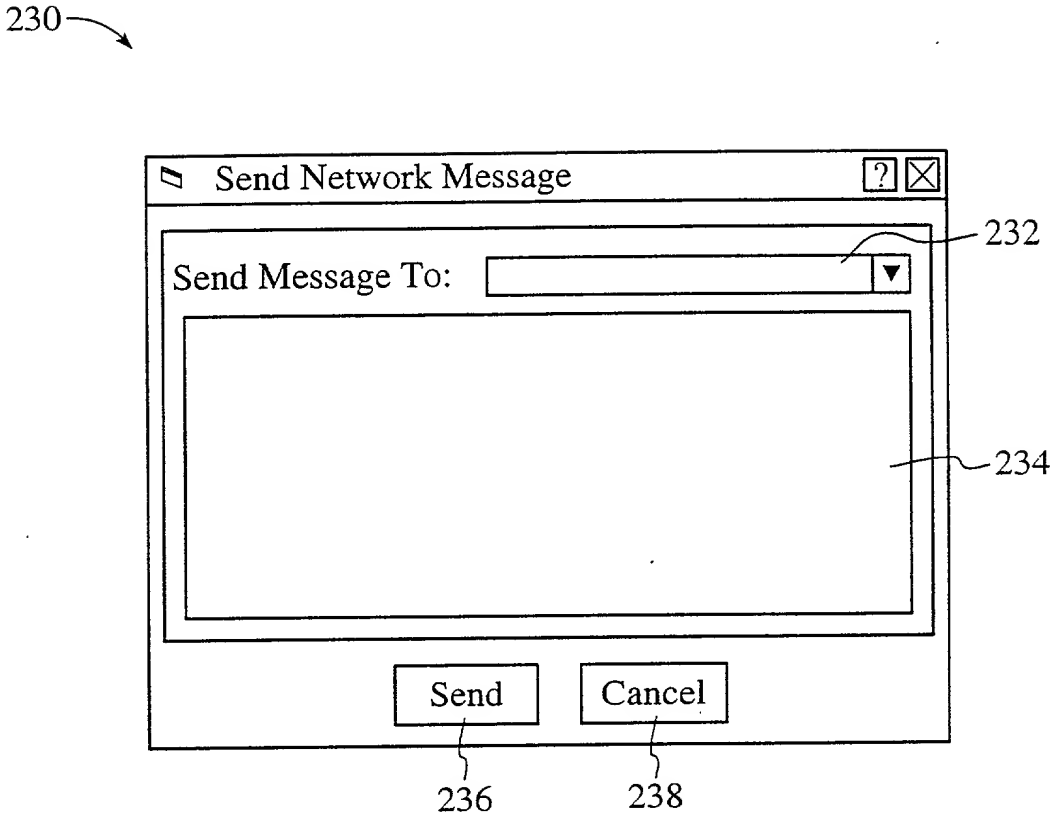

230
Send Network Message
Send Message To:
232
234
Send
Cancel
236
238

FIG. 10A

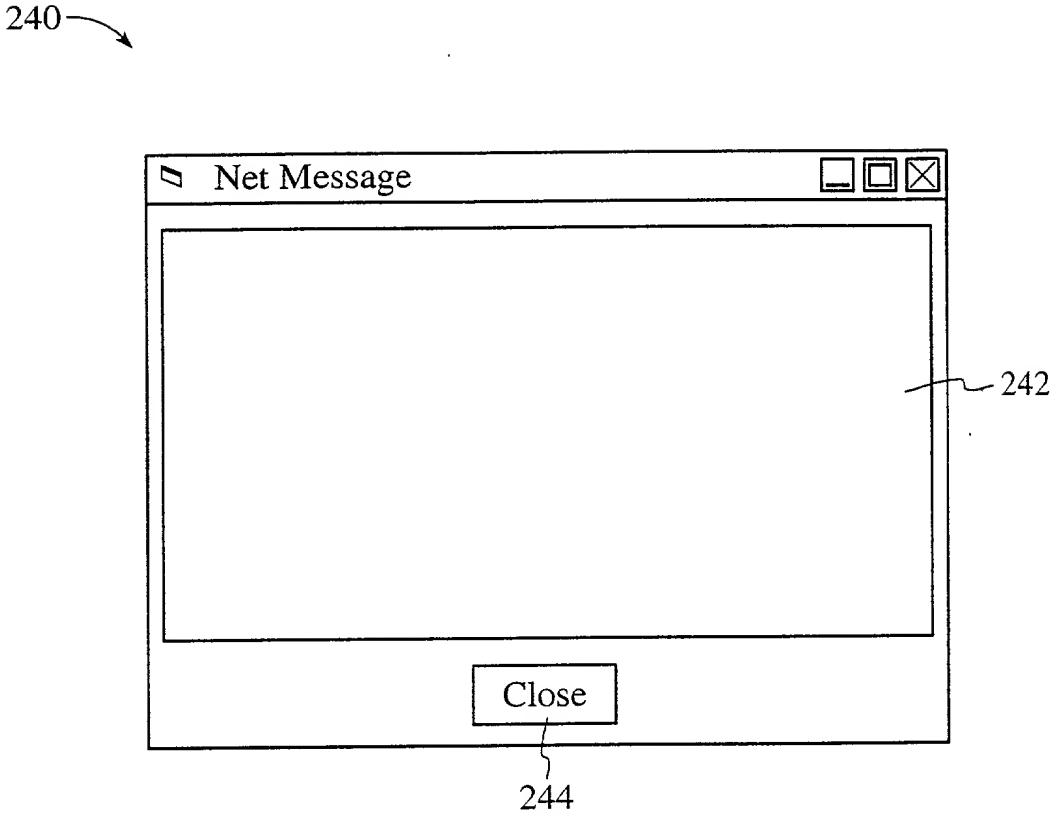


FIG. 10B

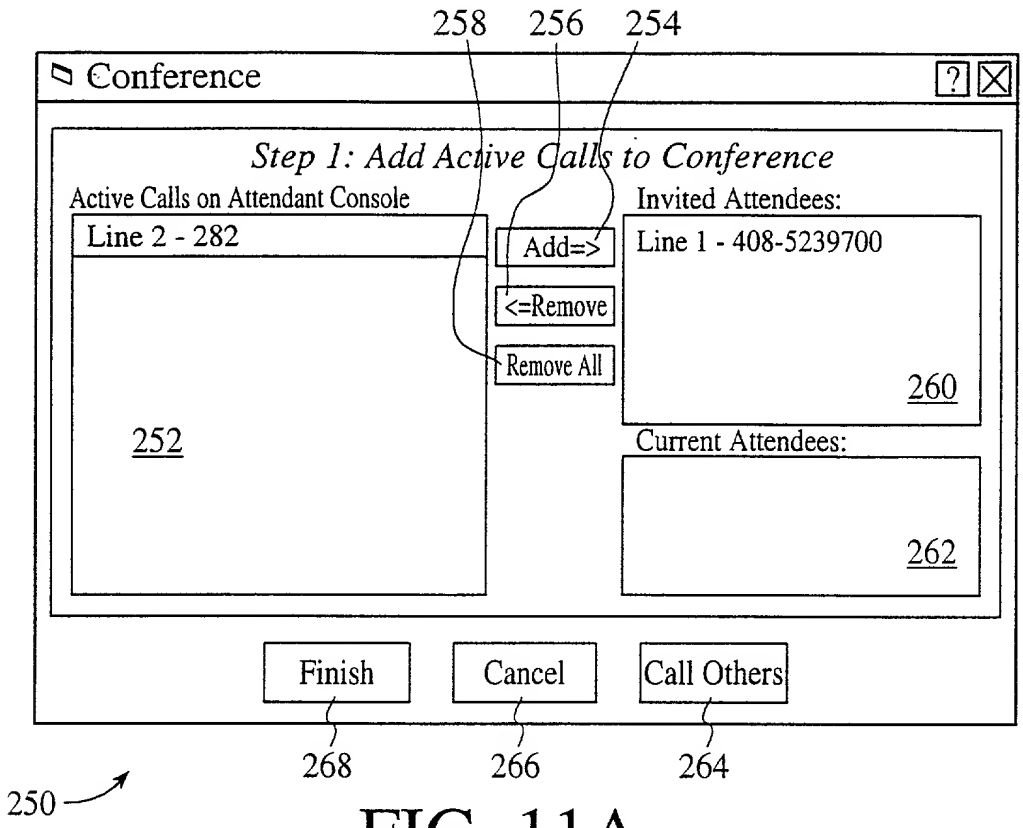


FIG. 11A

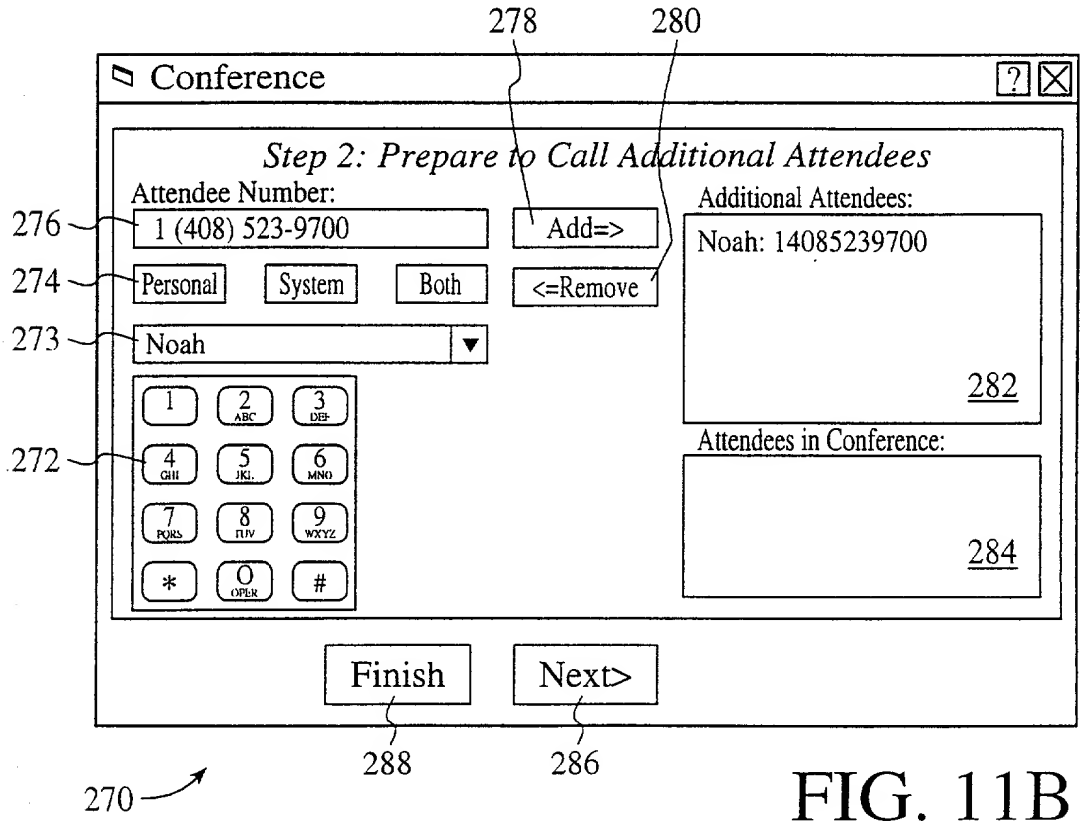


FIG. 11B

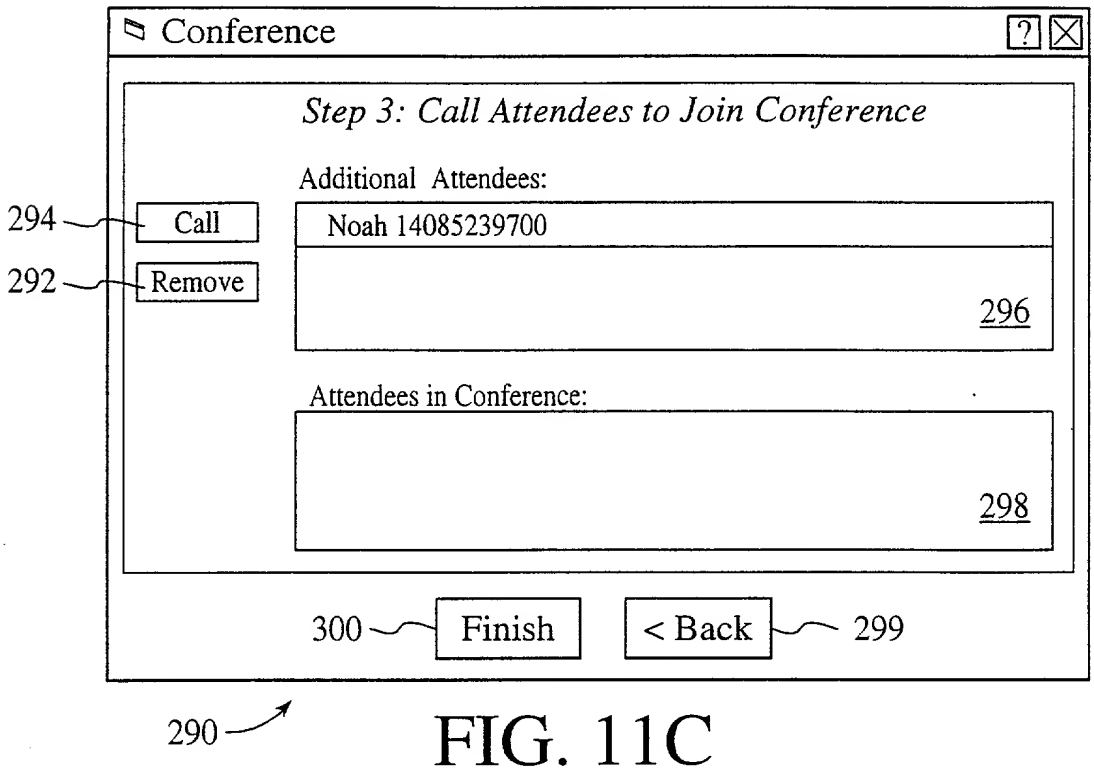


FIG. 11C

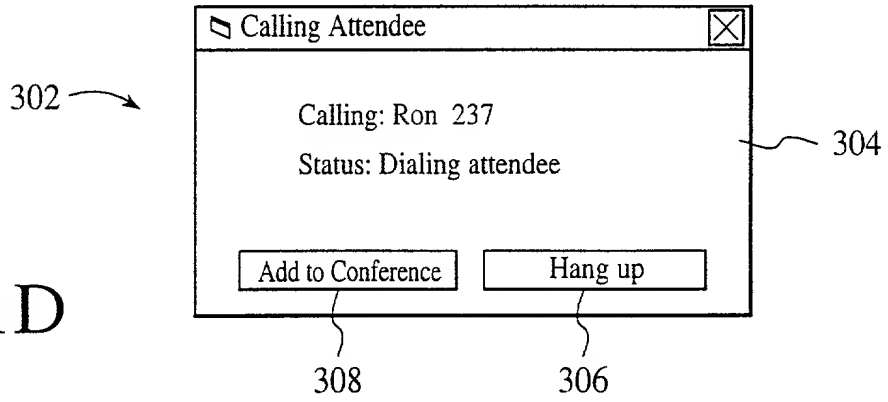


FIG. 11D

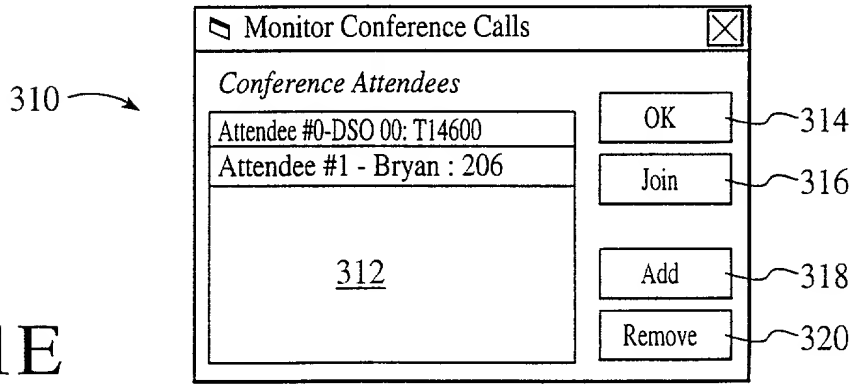


FIG. 11E

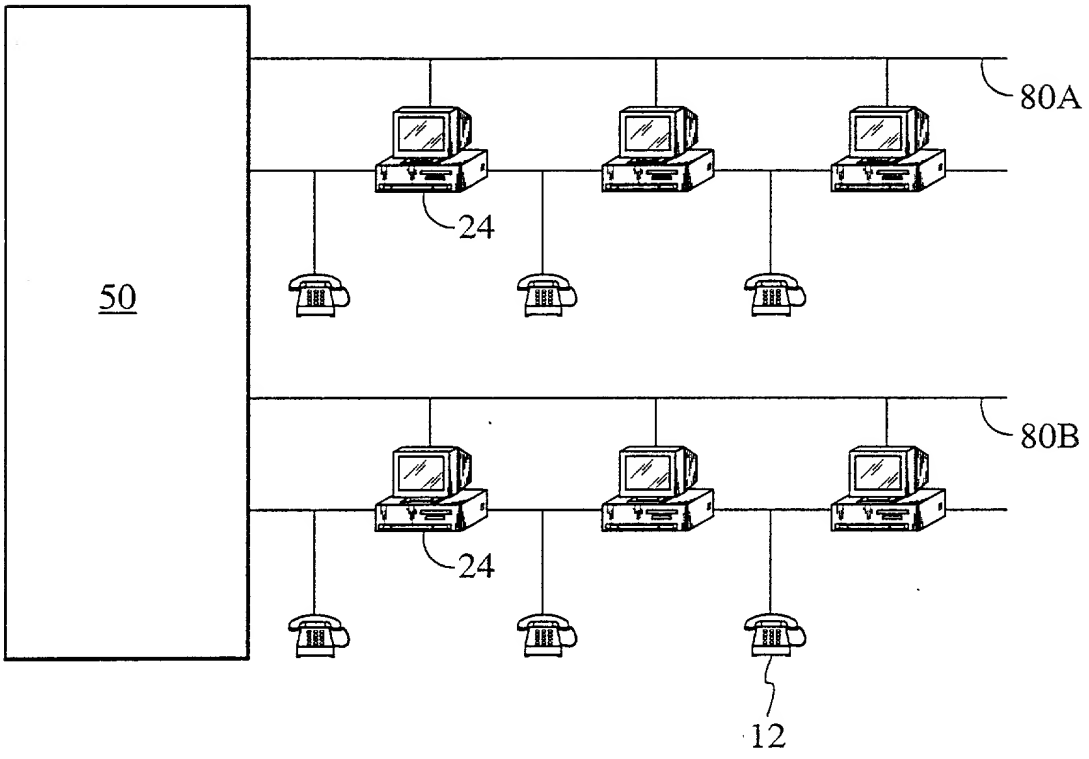


FIG. 12

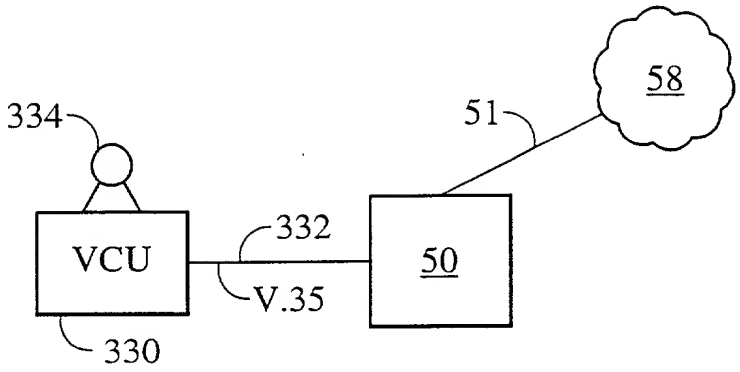


FIG. 13A

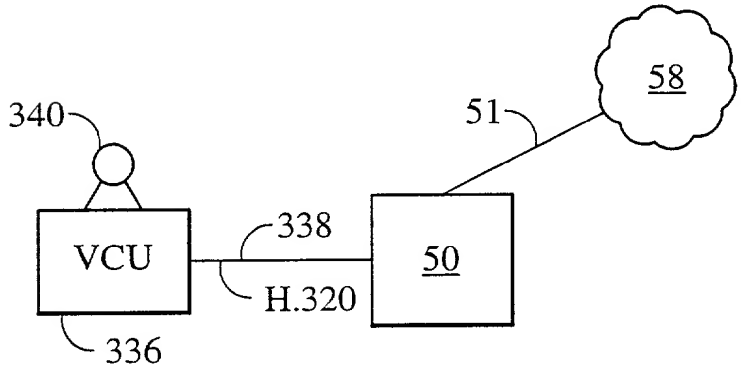


FIG. 13B

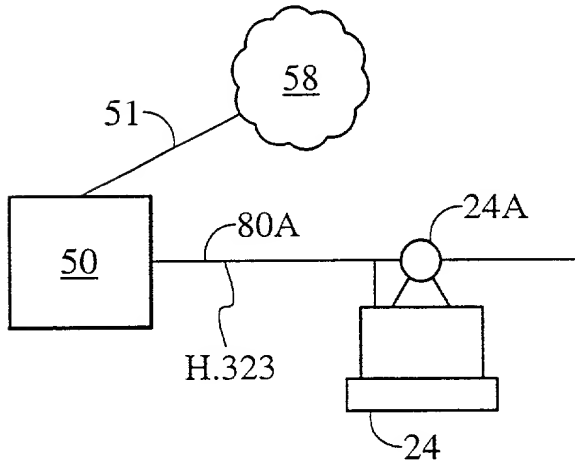


FIG. 13C

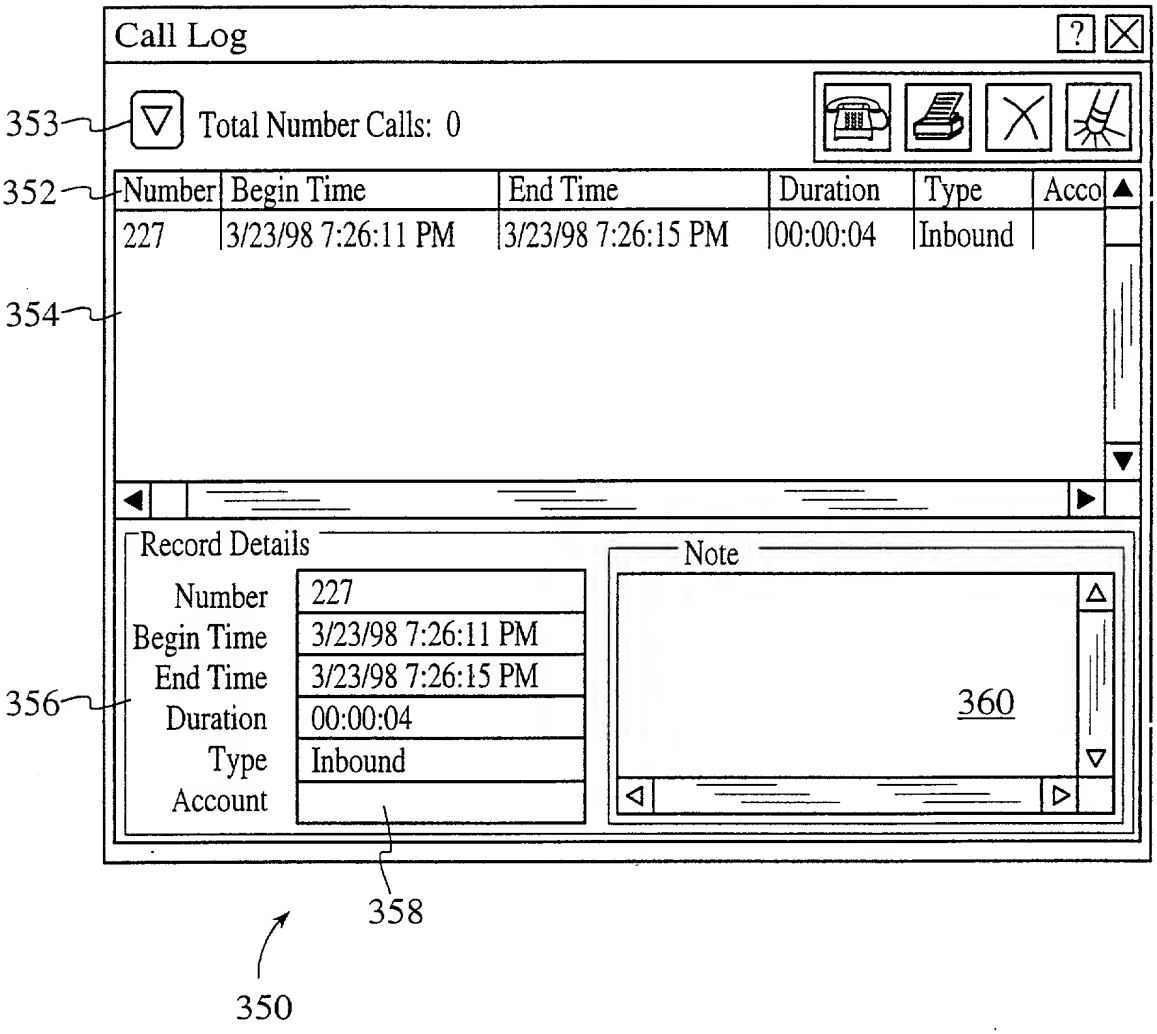

Call Log
353
Total Number Calls: 0
352
Number
Begin Time
End Time
Duration
Type
Acco
227
3/23/98 7:26:11 PM
3/23/98 7:26:15 PM
00:00:04
Inbound
354
Record Details
Number 227
Begin Time 3/23/98 7:26:11 PM
End Time 3/23/98 7:26:15 PM
Duration 00:00:04
Type Inbound
Account
356
Note
360
358
350

FIG. 14

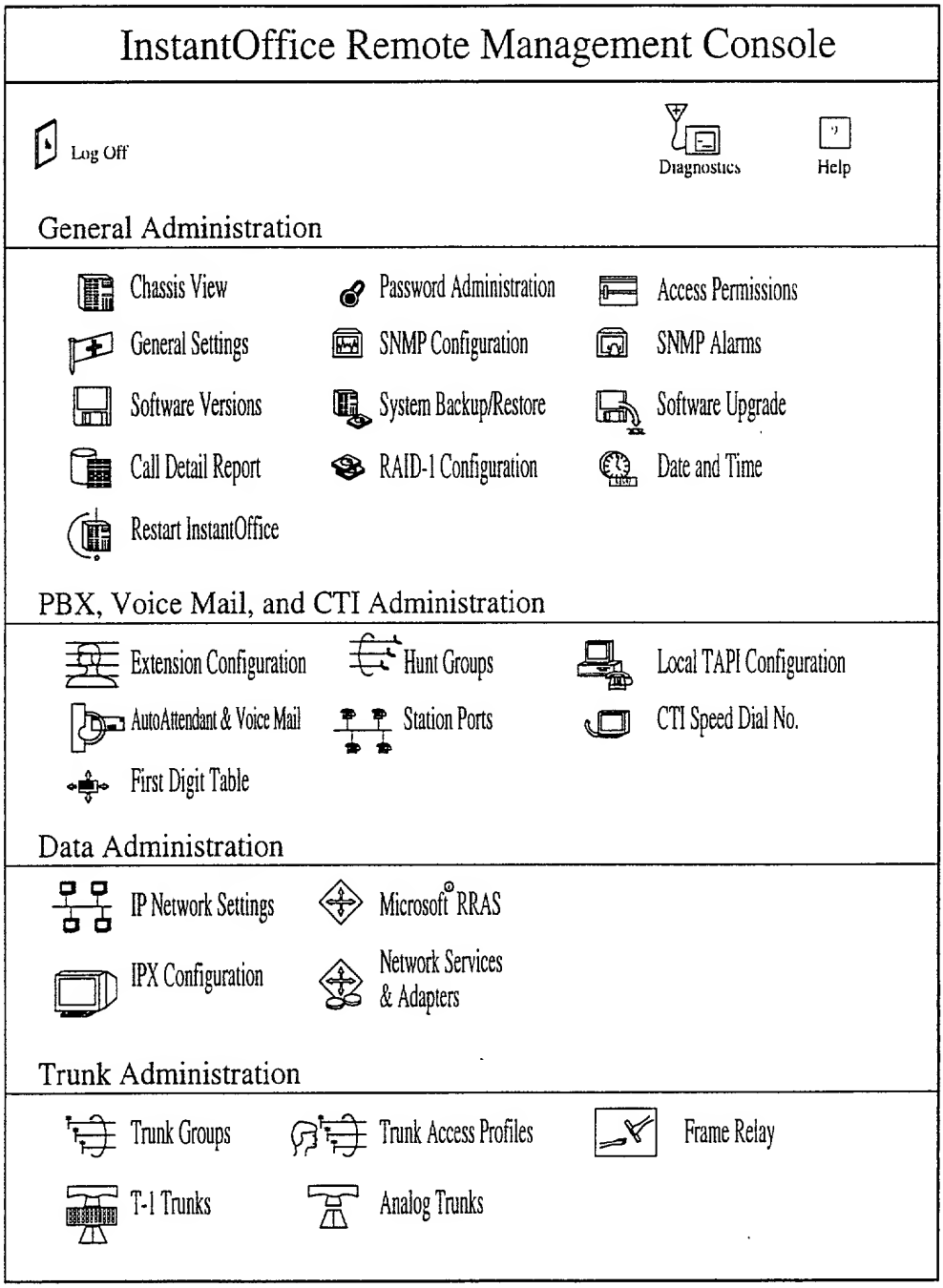

InstantOffice Remote Management Console
Log Off
Diagnostics
Help
General Administration
Chassis View
Password Administration
Access Permissions
General Settings
SNMP Configuration
SNMP Alarms
Software Versions
System Backup/Restore
Software Upgrade
Call Detail Report
RAID-1 Configuration
Date and Time
Restart InstantOffice
PBX, Voice Mail, and CTI Administration
Extension Configuration
Hunt Groups
Local TAPI Configuration
AutoAttendant & Voice Mail
Station Ports
CTI Speed Dial No.
First Digit Table
Data Administration
IP Network Settings
Microsoft® RRAS
IPX Configuration
Network Services & Adapters
Trunk Administration
Trunk Groups
Trunk Access Profiles
Frame Relay
T-1 Trunks
Analog Trunks

FIG. 15

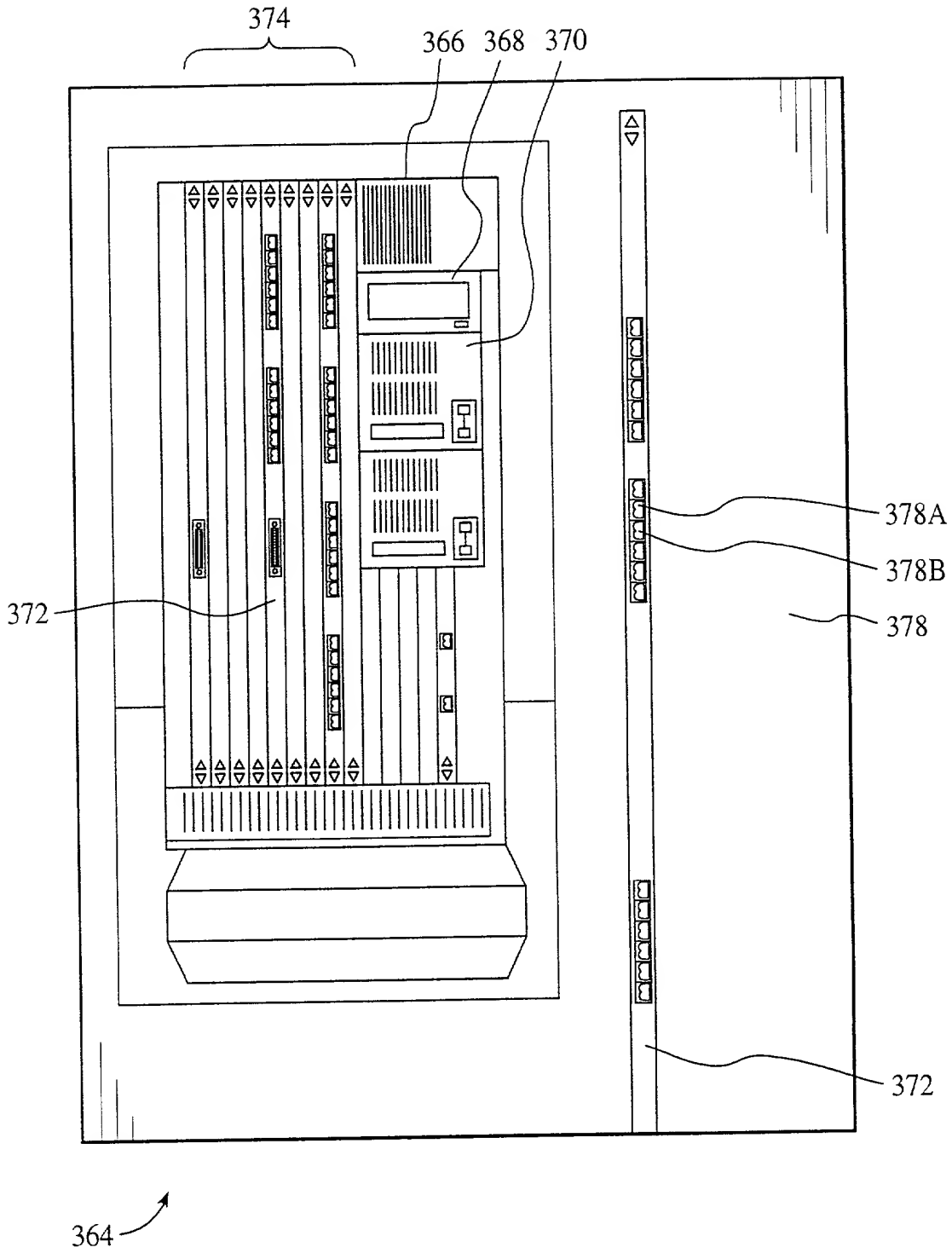


FIG. 16A

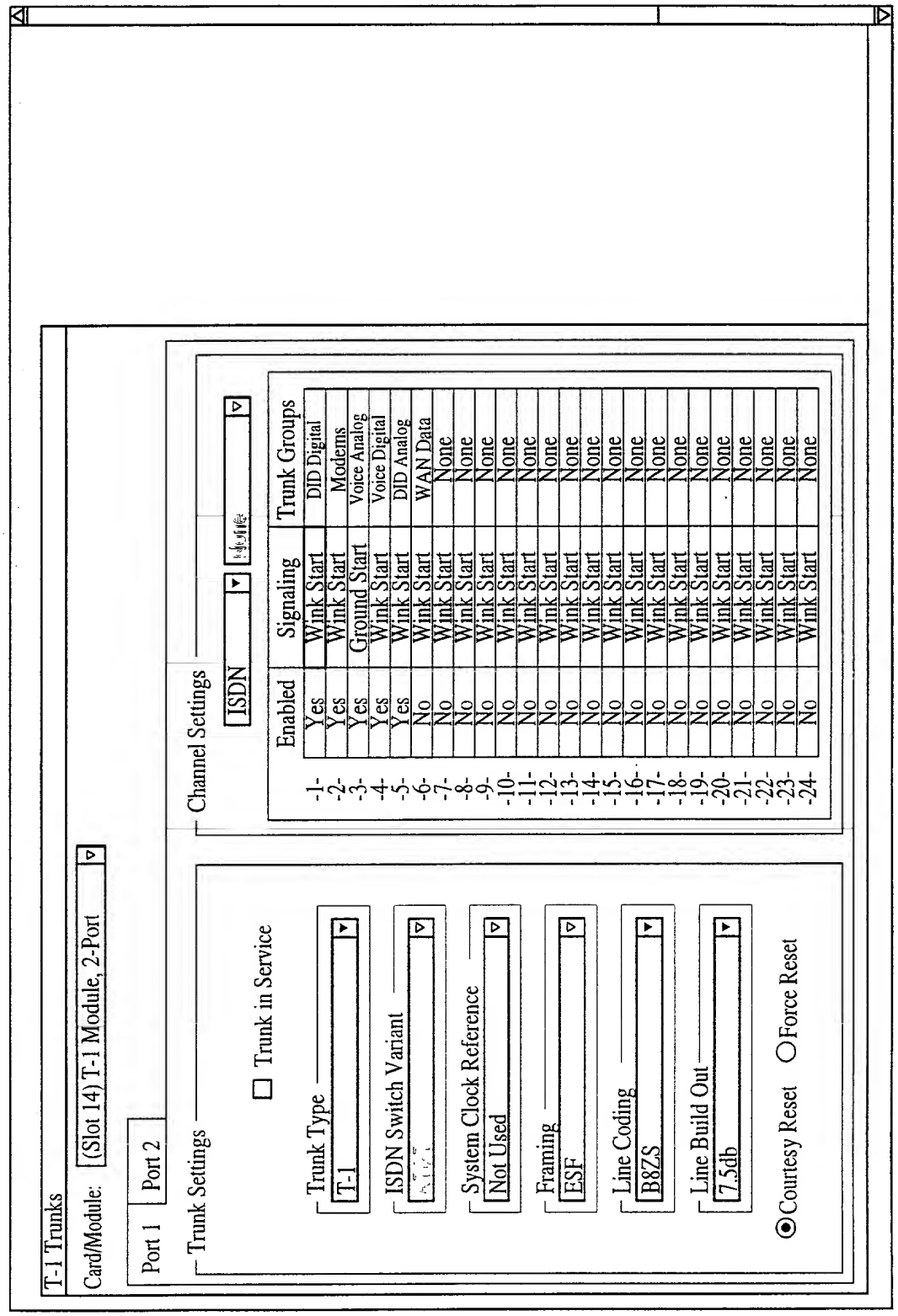
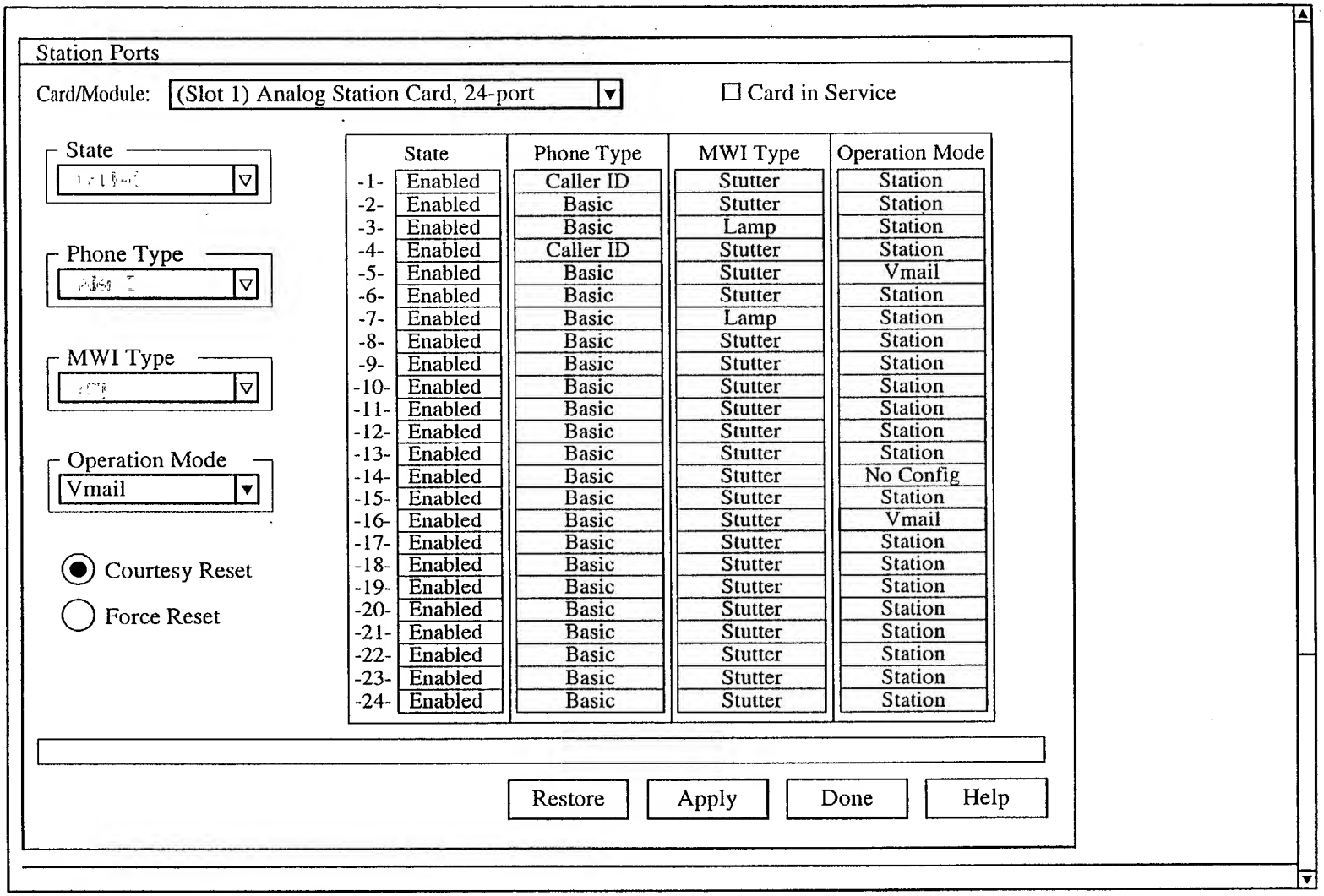

T-1 Trunks
Card/Module: (Slot 14) T-1 Module, 2-Port
Port 1
Port 2
Trunk Settings
Trunk in Service
Trunk Type
T-1
ISDN Switch Variant
System Clock Reference
Not Used
Framing
ESF
Line Coding
B8ZS
Line Build Out
7.5db
Courtesy Reset
Force Reset
Channel Settings
ISDN
Enabled
Signaling
Trunk Groups
-1- Yes Wink Start DID Digital
-2- Yes Wink Start Modems
-3- Yes Ground Start Voice Analog
-4- Yes Wink Start Voice Digital
-5- Yes Wink Start DID Analog
-6- No Wink Start WAN Data
-7- No Wink Start None
-8- No Wink Start None
-9- No Wink Start None
-10- No Wink Start None
-11- No Wink Start None
-12- No Wink Start None
-13- No Wink Start None
-14- No Wink Start None
-15- No Wink Start None
-16- No Wink Start None
-17- No Wink Start None
-18- No Wink Start None
-19- No Wink Start None
-20- No Wink Start None
-21- No Wink Start None
-22- No Wink Start None
-23- No Wink Start None
-24- No Wink Start None
380

FIG. 16B



	State	Phone Type	MWI Type	Operation Mode
-1-	Enabled	Caller ID	Stutter	Station
-2-	Enabled	Basic	Stutter	Station
-3-	Enabled	Basic	Lamp	Station
-4-	Enabled	Caller ID	Stutter	Station
-5-	Enabled	Basic	Stutter	Vmail
-6-	Enabled	Basic	Stutter	Station
-7-	Enabled	Basic	Lamp	Station
-8-	Enabled	Basic	Stutter	Station
-9-	Enabled	Basic	Stutter	Station
-10-	Enabled	Basic	Stutter	Station
-11-	Enabled	Basic	Stutter	Station
-12-	Enabled	Basic	Stutter	Station
-13-	Enabled	Basic	Stutter	Station
-14-	Enabled	Basic	Stutter	No Config
-15-	Enabled	Basic	Stutter	Station
-16-	Enabled	Basic	Stutter	Vmail
-17-	Enabled	Basic	Stutter	Station
-18-	Enabled	Basic	Stutter	Station
-19-	Enabled	Basic	Stutter	Station
-20-	Enabled	Basic	Stutter	Station
-21-	Enabled	Basic	Stutter	Station
-22-	Enabled	Basic	Stutter	Station
-23-	Enabled	Basic	Stutter	Station
-24-	Enabled	Basic	Stutter	Station

382

FIG. 16C

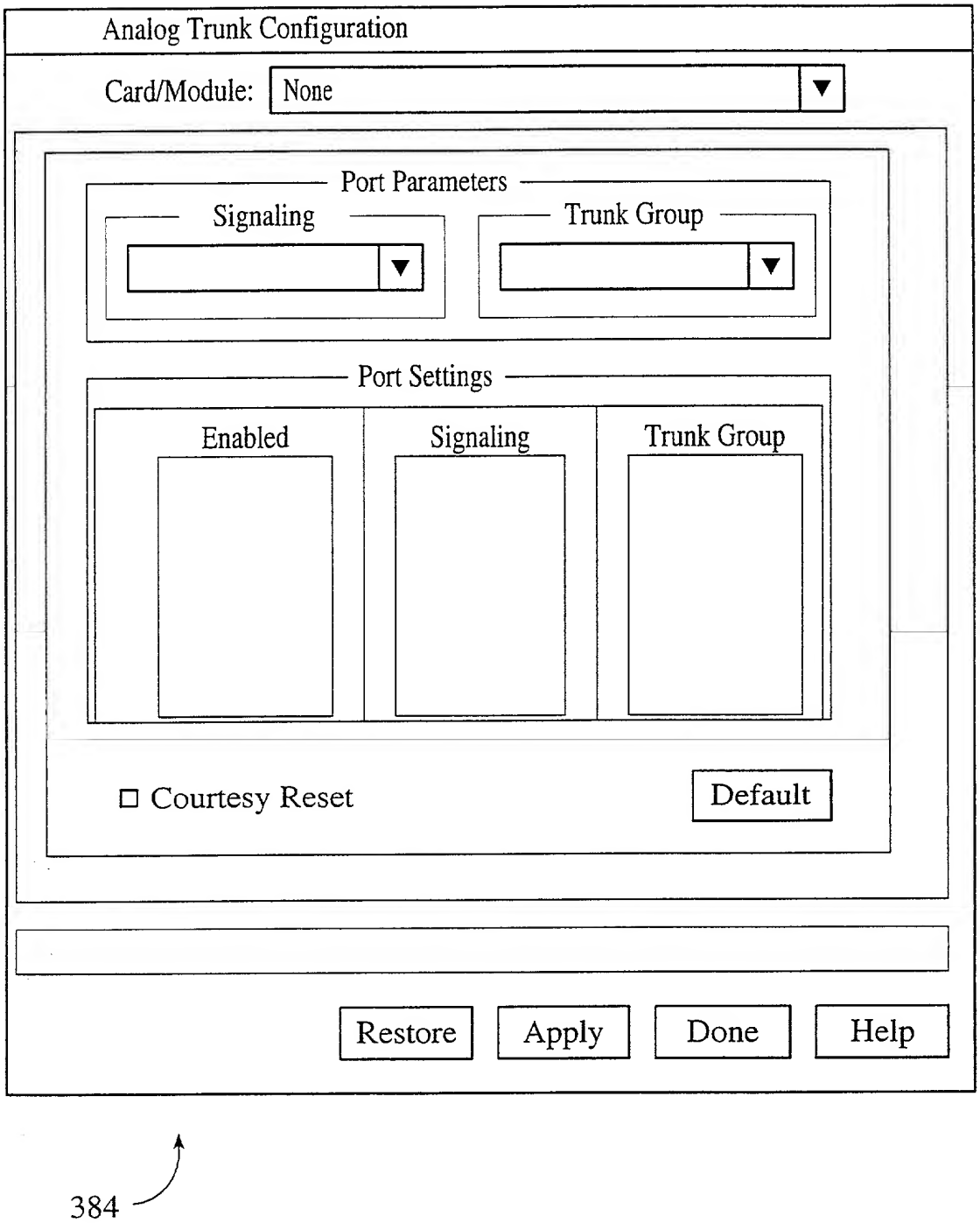

Analog Trunk Configuration
Card/Module:
None
Port Parameters
Signaling
Trunk Group
Port Settings
Enabled
Signaling
Trunk Group
Courtesy Reset
Default
Restore
Apply
Done
Help
384

FIG. 16D

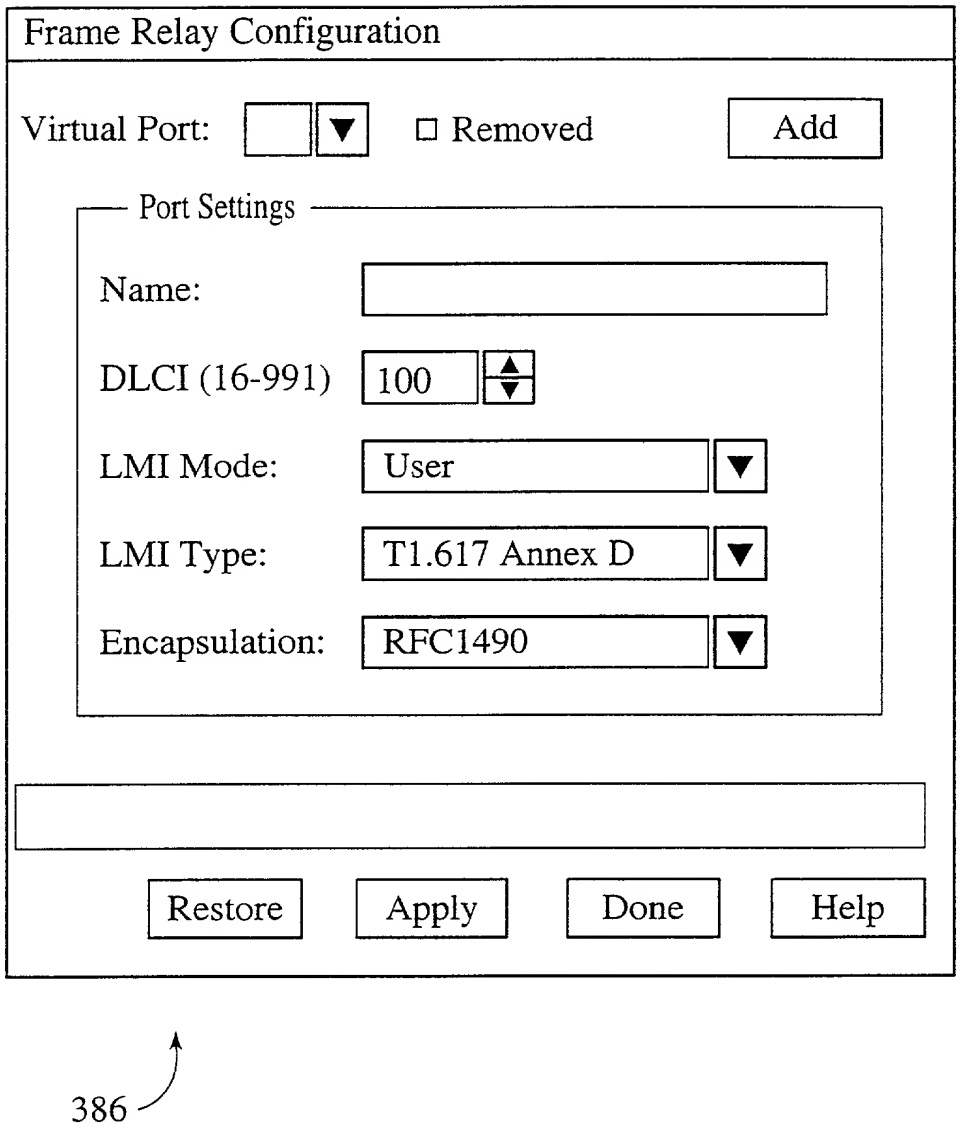

Frame Relay Configuration
Virtual Port:
Removed
Add
Port Settings
Name:
DLCI (16-991)
100
LMI Mode:
User
LMI Type:
T1.617 Annex D
Encapsulation:
RFC1490
Restore
Apply
Done
Help
386

FIG. 16E

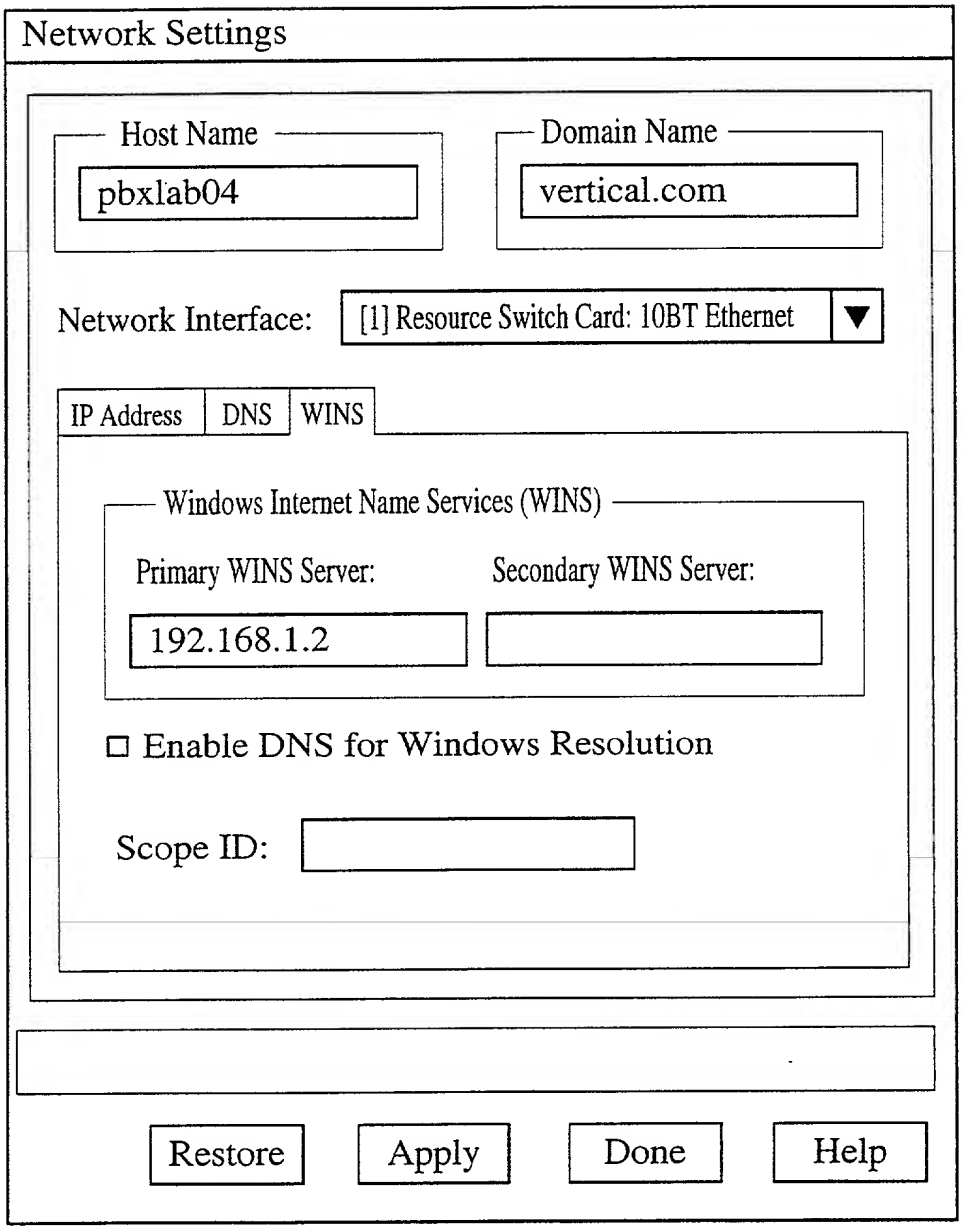

Network Settings
Host Name
pbxlab04
Domain Name
vertical.com
Network Interface:
[1] Resource Switch Card: 10BT Ethernet
IP Address
DNS
WINS
Windows Internet Name Services (WINS)
Primary WINS Server:
Secondary WINS Server:
192.168.1.2
Enable DNS for Windows Resolution
Scope ID:
Restore
Apply
Done
Help
388

FIG. 16F

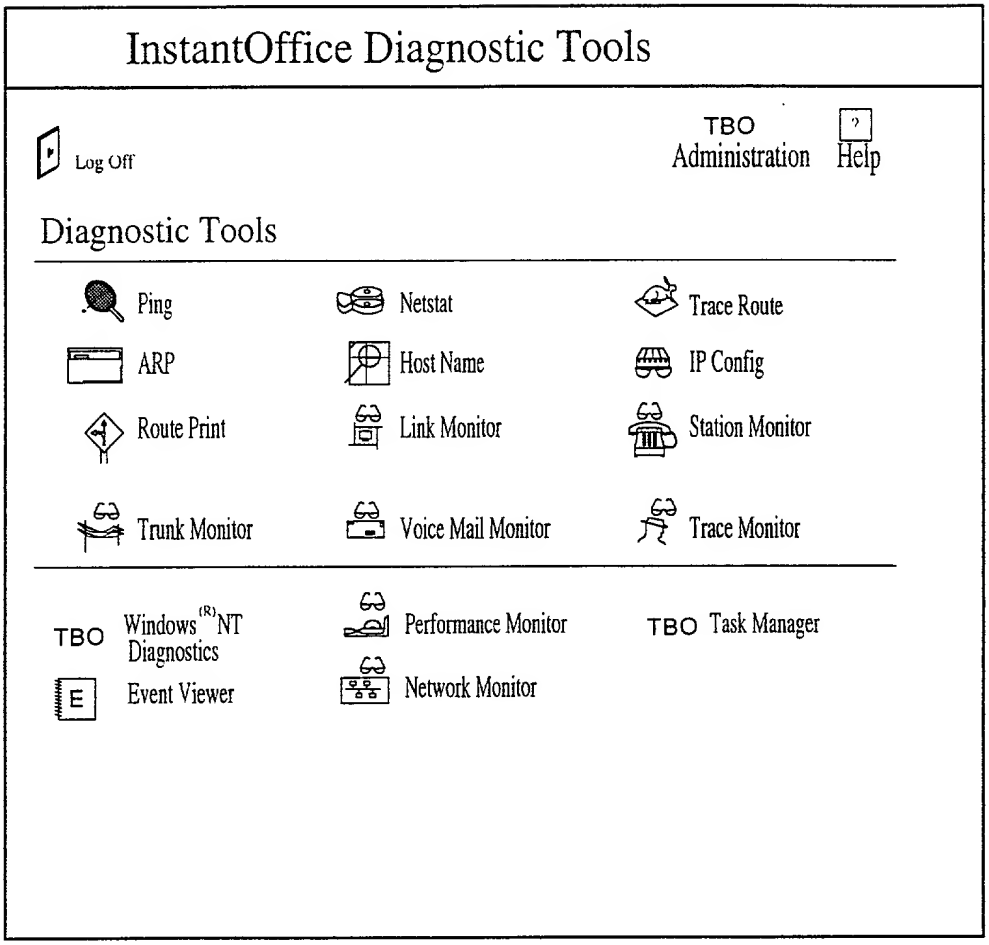
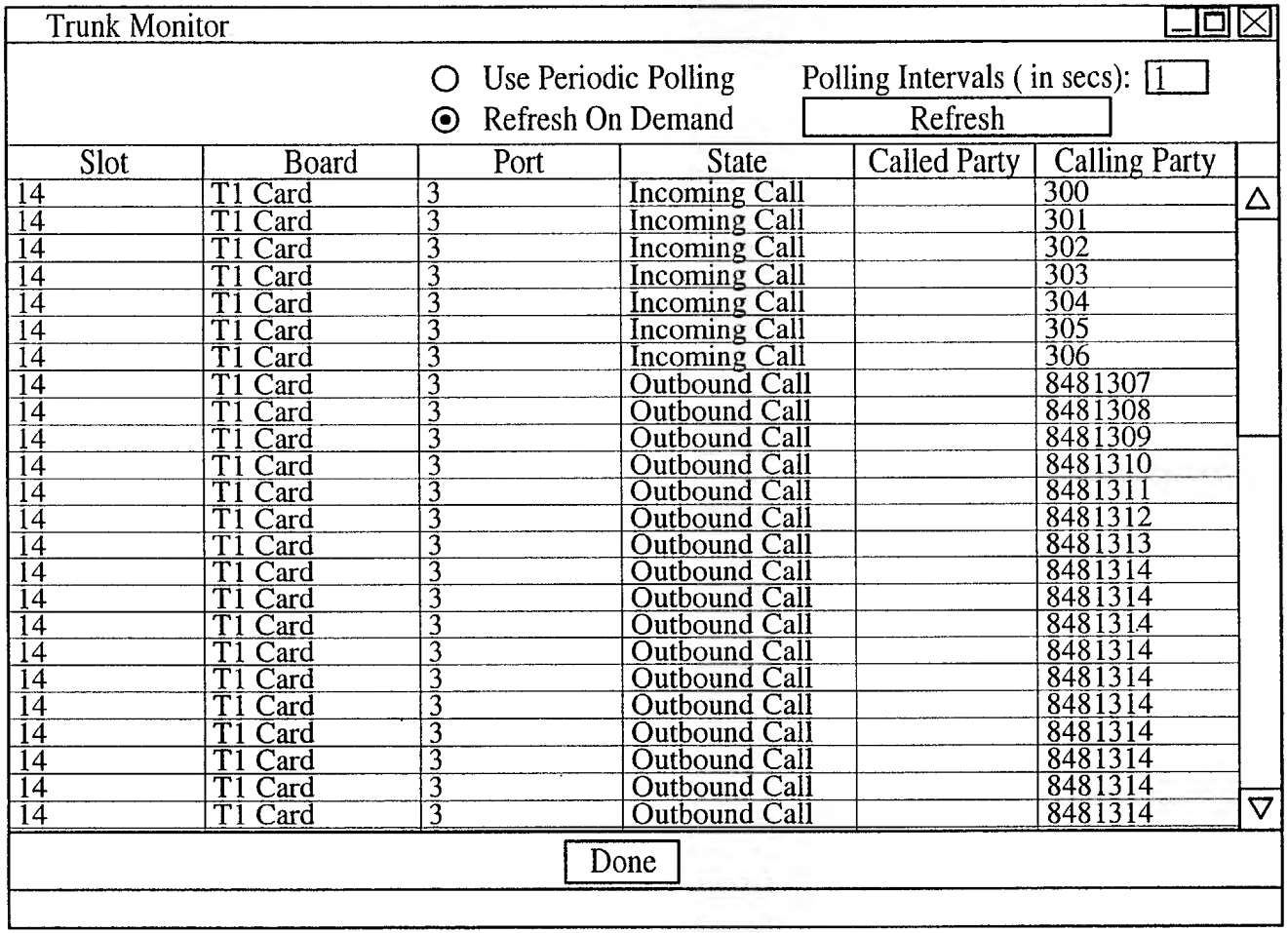

InstantOffice Diagnostic Tools
Log Off
TBO
Administration
Help
Diagnostic Tools
Ping
Netstat
Trace Route
ARP
Host Name
IP Config
Route Print
Link Monitor
Station Monitor
Trunk Monitor
Voice Mail Monitor
Trace Monitor
TBO
Windows (R) NT
Diagnostics
Performance Monitor
TBO
Task Manager
E
Event Viewer
Network Monitor

FIG. 17A


Trunk Monitor
Use Periodic Polling
Refresh On Demand
Polling Intervals (in secs): 1
Refresh
Slot | Board | Port | State | Called Party | Calling Party
14 | T1 Card | 3 | Incoming Call | | 300
14 | T1 Card | 3 | Incoming Call | | 301
14 | T1 Card | 3 | Incoming Call | | 302
14 | T1 Card | 3 | Incoming Call | | 303
14 | T1 Card | 3 | Incoming Call | | 304
14 | T1 Card | 3 | Incoming Call | | 305
14 | T1 Card | 3 | Incoming Call | | 306
14 | T1 Card | 3 | Outbound Call | | 8481307
14 | T1 Card | 3 | Outbound Call | | 8481308
14 | T1 Card | 3 | Outbound Call | | 8481309
14 | T1 Card | 3 | Outbound Call | | 8481310
14 | T1 Card | 3 | Outbound Call | | 8481311
14 | T1 Card | 3 | Outbound Call | | 8481312
14 | T1 Card | 3 | Outbound Call | | 8481313
14 | T1 Card | 3 | Outbound Call | | 8481314
14 | T1 Card | 3 | Outbound Call | | 8481314
14 | T1 Card | 3 | Outbound Call | | 8481314
14 | T1 Card | 3 | Outbound Call | | 8481314
14 | T1 Card | 3 | Outbound Call | | 8481314
14 | T1 Card | 3 | Outbound Call | | 8481314
14 | T1 Card | 3 | Outbound Call | | 8481314
14 | T1 Card | 3 | Outbound Call | | 8481314
14 | T1 Card | 3 | Outbound Call | | 8481314
Done

390

FIG. 17B

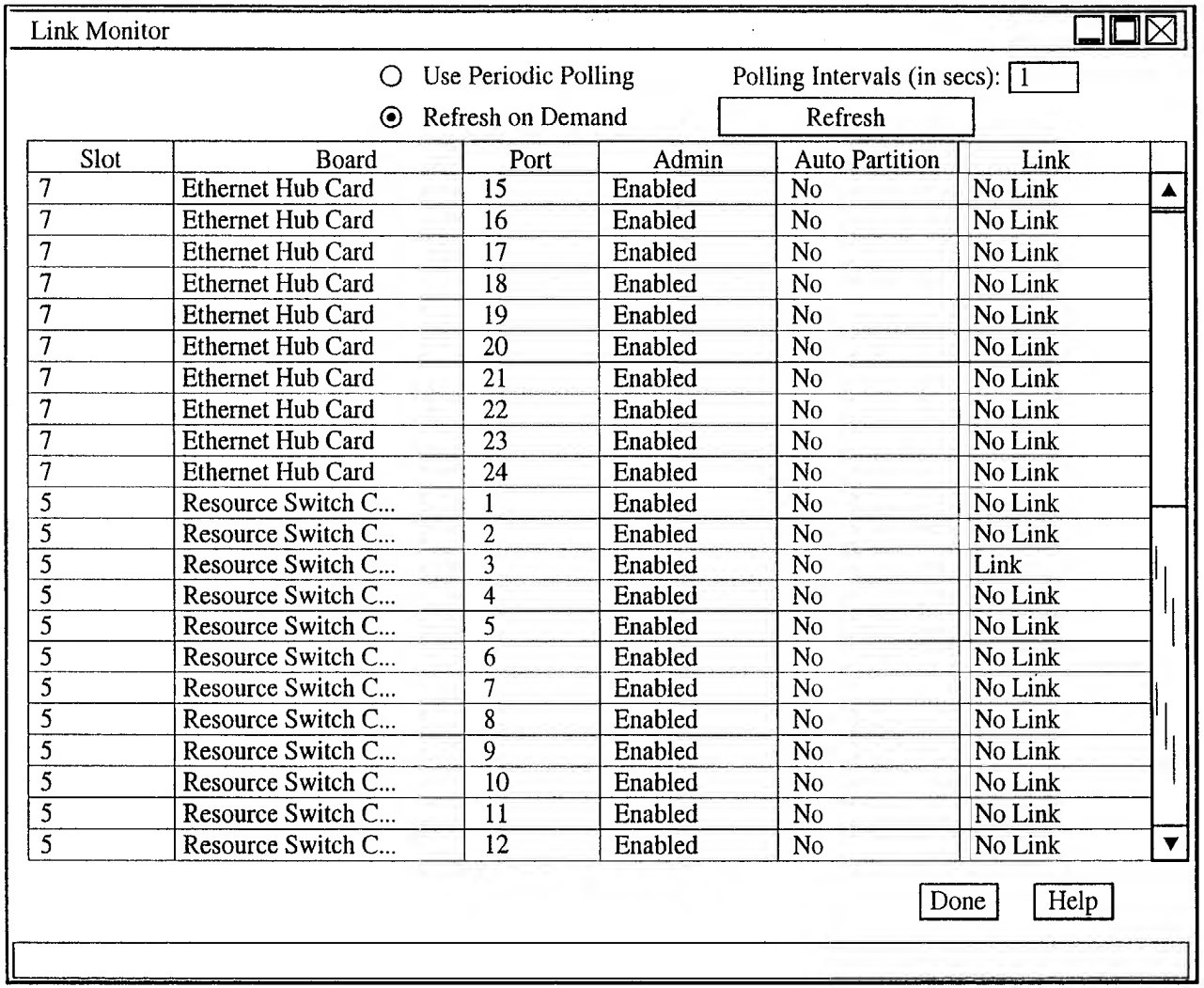
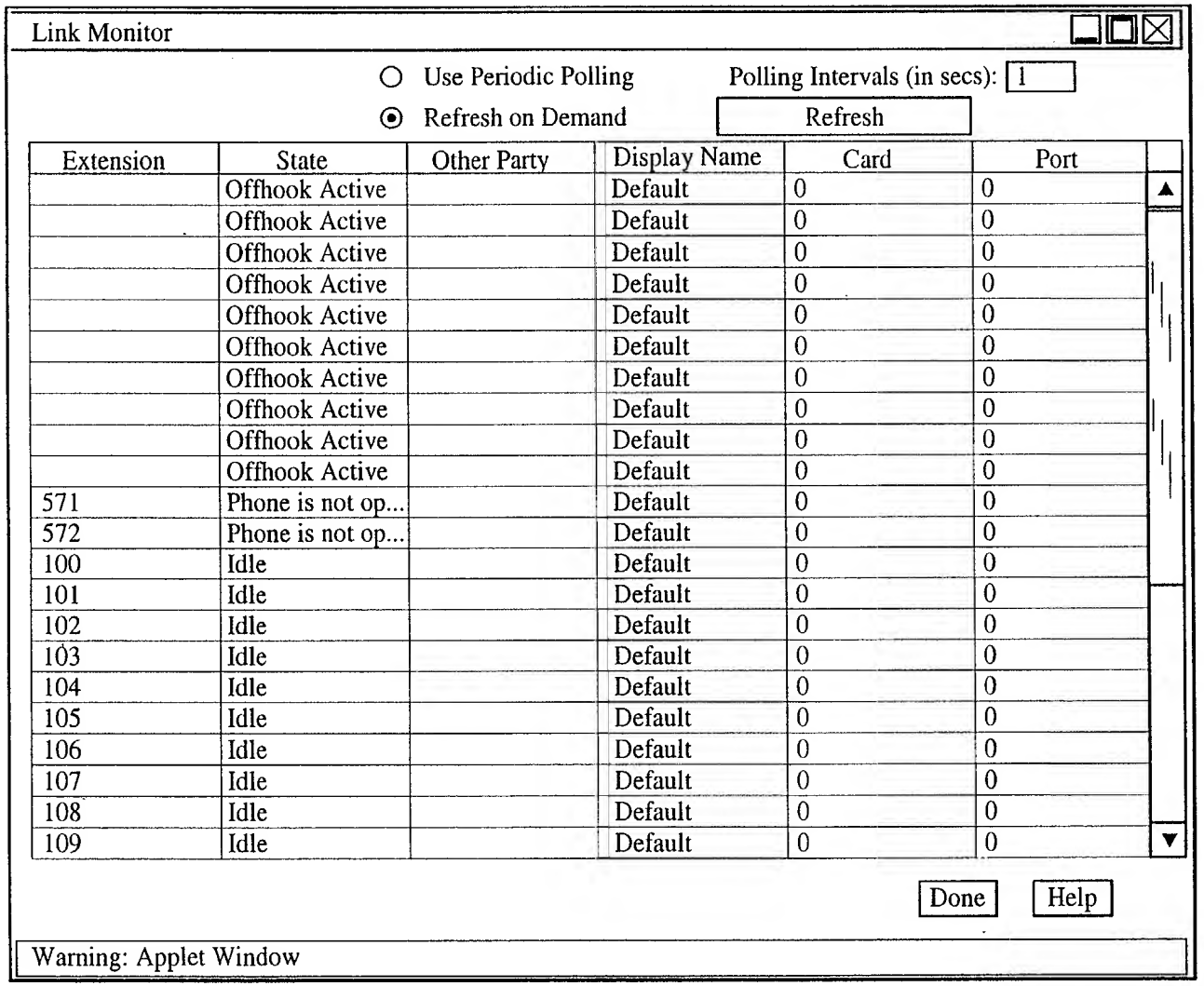

Link Monitor
Use Periodic Polling
Polling Intervals (in secs): 1
Refresh on Demand
Refresh
Slot | Board | Port | Admin | Auto Partition | Link
7 | Ethernet Hub Card | 15 | Enabled | No | No Link
7 | Ethernet Hub Card | 16 | Enabled | No | No Link
7 | Ethernet Hub Card | 17 | Enabled | No | No Link
7 | Ethernet Hub Card | 18 | Enabled | No | No Link
7 | Ethernet Hub Card | 19 | Enabled | No | No Link
7 | Ethernet Hub Card | 20 | Enabled | No | No Link
7 | Ethernet Hub Card | 21 | Enabled | No | No Link
7 | Ethernet Hub Card | 22 | Enabled | No | No Link
7 | Ethernet Hub Card | 23 | Enabled | No | No Link
7 | Ethernet Hub Card | 24 | Enabled | No | No Link
5 | Resource Switch C... | 1 | Enabled | No | No Link
5 | Resource Switch C... | 2 | Enabled | No | No Link
5 | Resource Switch C... | 3 | Enabled | No | Link
5 | Resource Switch C... | 4 | Enabled | No | No Link
5 | Resource Switch C... | 5 | Enabled | No | No Link
5 | Resource Switch C... | 6 | Enabled | No | No Link
5 | Resource Switch C... | 7 | Enabled | No | No Link
5 | Resource Switch C... | 8 | Enabled | No | No Link
5 | Resource Switch C... | 9 | Enabled | No | No Link
5 | Resource Switch C... | 10 | Enabled | No | No Link
5 | Resource Switch C... | 11 | Enabled | No | No Link
5 | Resource Switch C... | 12 | Enabled | No | No Link
Done
Help
392

FIG. 17C



Extension	State	Other Party	Display Name	Card	Port
	Offhook Active		Default	0	0
	Offhook Active		Default	0	0
	Offhook Active		Default	0	0
	Offhook Active		Default	0	0
	Offhook Active		Default	0	0
	Offhook Active		Default	0	0
	Offhook Active		Default	0	0
	Offhook Active		Default	0	0
	Offhook Active		Default	0	0
	Offhook Active		Default	0	0
571	Phone is not op...		Default	0	0
572	Phone is not op...		Default	0	0
100	Idle		Default	0	0
101	Idle		Default	0	0
102	Idle		Default	0	0
103	Idle		Default	0	0
104	Idle		Default	0	0
105	Idle		Default	0	0
106	Idle		Default	0	0
107	Idle		Default	0	0
108	Idle		Default	0	0
109	Idle		Default	0	0

394

FIG. 17D

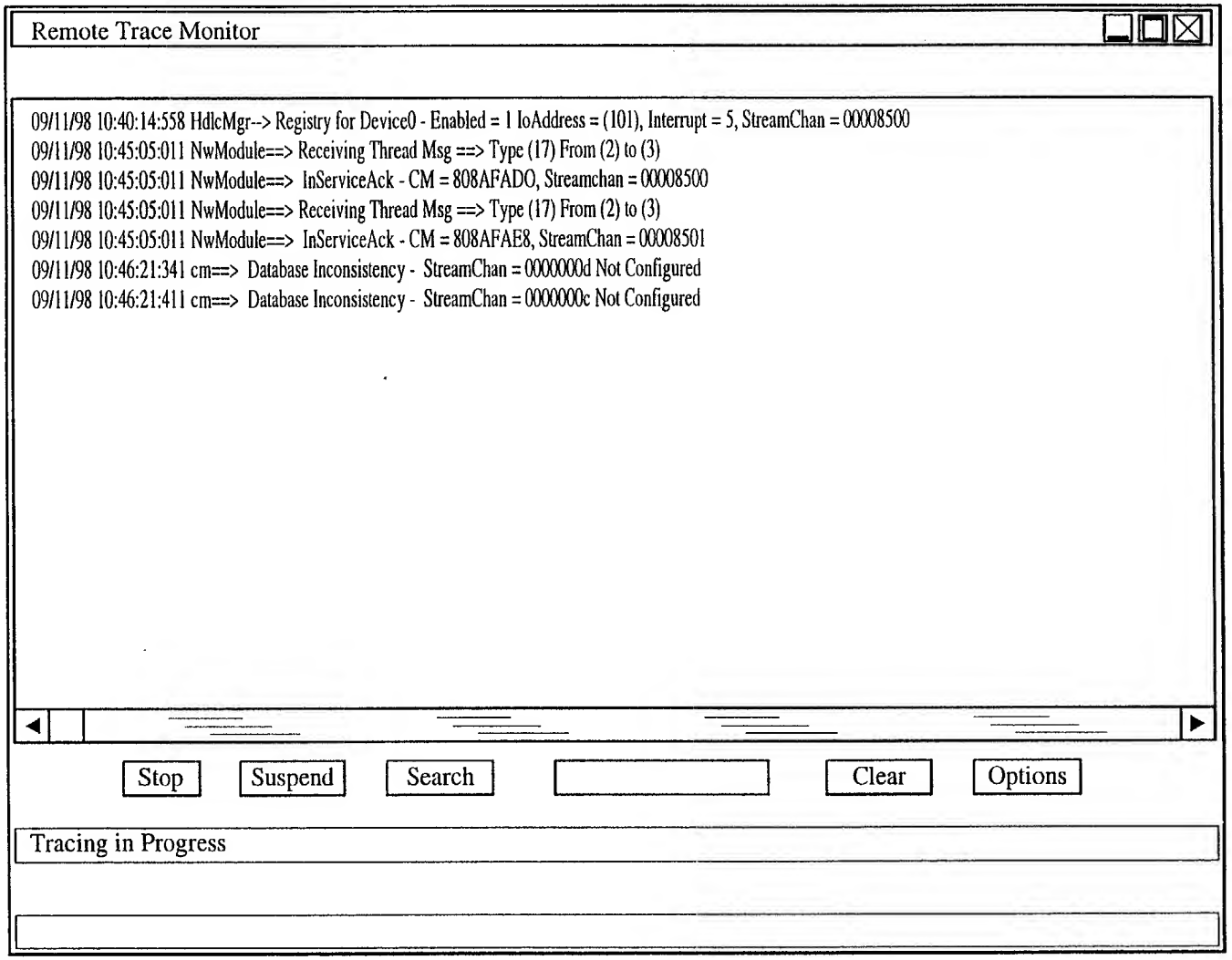

Remote Trace Monitor
09/11/98 10:40:14:558 HdlcMgr--> Registry for Device0 - Enabled = 1 IoAddress = (101), Interrupt = 5, StreamChan = 00008500
09/11/98 10:45:05:011 NwModule==> Receiving Thread Msg ==> Type (17) From (2) to (3)
09/11/98 10:45:05:011 NwModule==> InServiceAck - CM = 808AFADO, Streamchan = 00008500
09/11/98 10:45:05:011 NwModule==> Receiving Thread Msg ==> Type (17) From (2) to (3)
09/11/98 10:45:05:011 NwModule==> InServiceAck - CM = 808AFAE8, StreamChan = 00008501
09/11/98 10:46:21:341 cm==> Database Inconsistency - StreamChan = 0000000d Not Configured
09/11/98 10:46:21:411 cm==> Database Inconsistency - StreamChan = 0000000c Not Configured
Stop
Suspend
Search
Clear
Options
Tracing in Progress
396

FIG. 17E

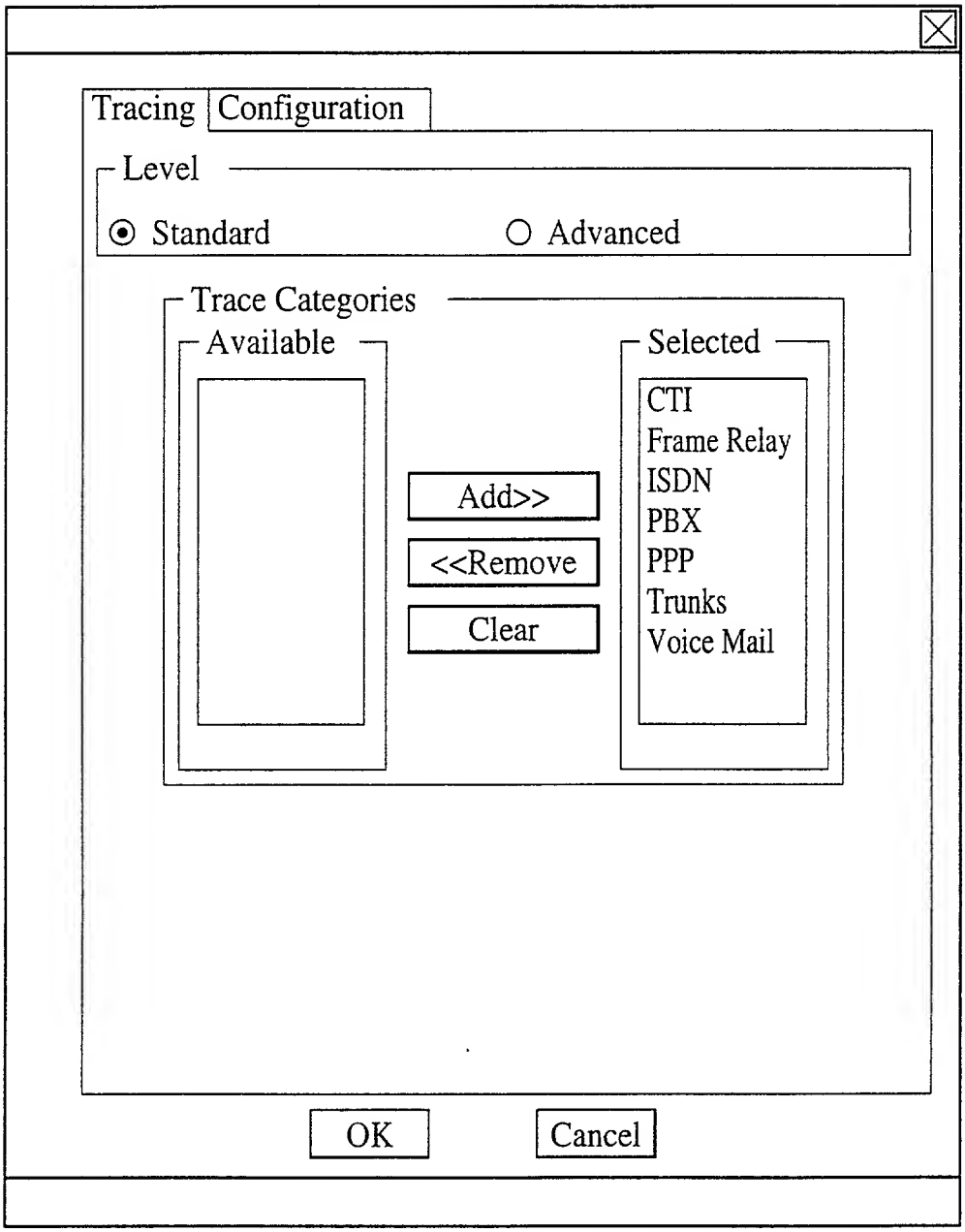

Tracing
Configuration
Level
Standard
Advanced
Trace Categories
Available
Selected
CTI
Frame Relay
ISDN
PBX
PPP
Trunks
Voice Mail
Add>>
<<Remove
Clear
OK
Cancel
397

FIG. 17F

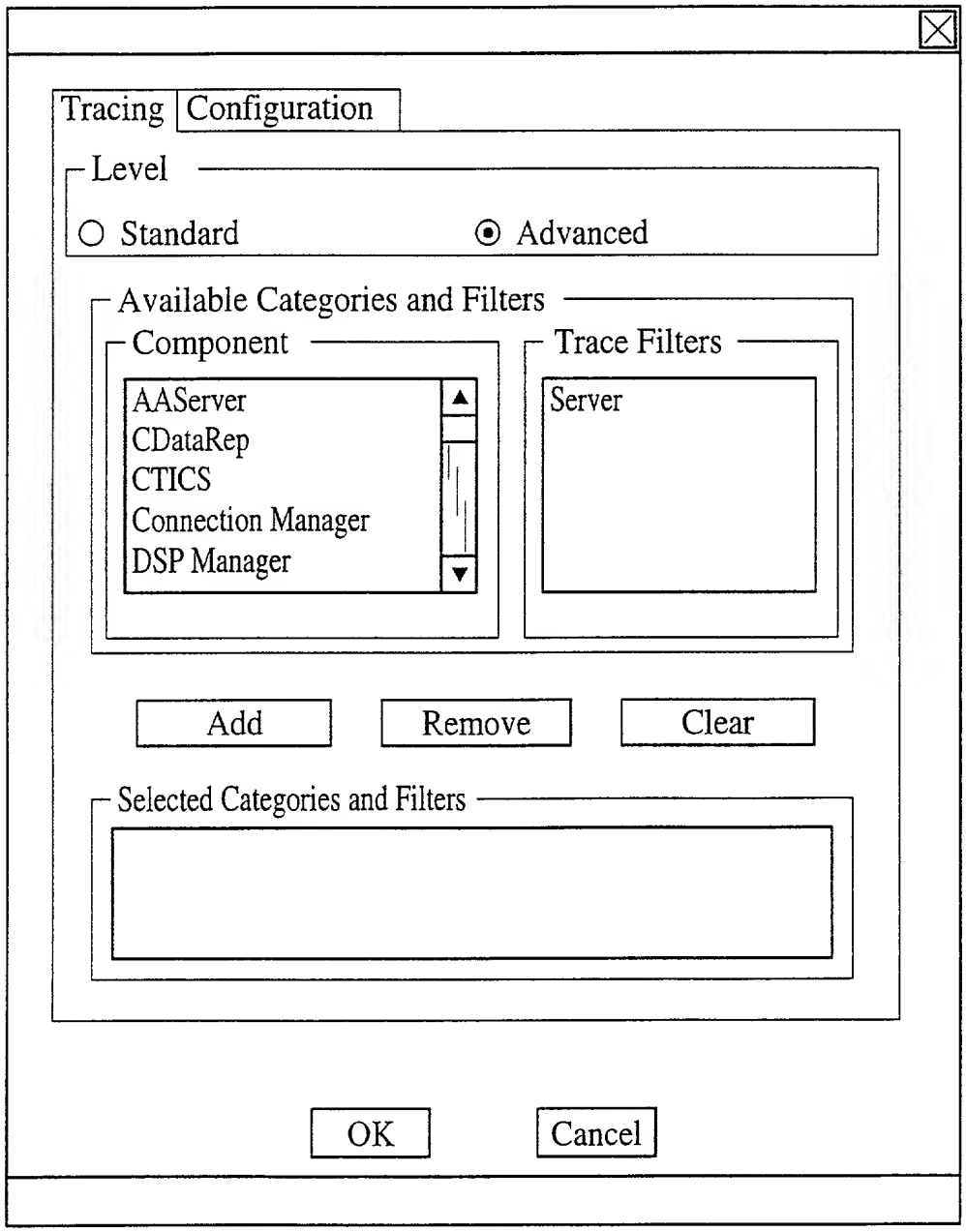
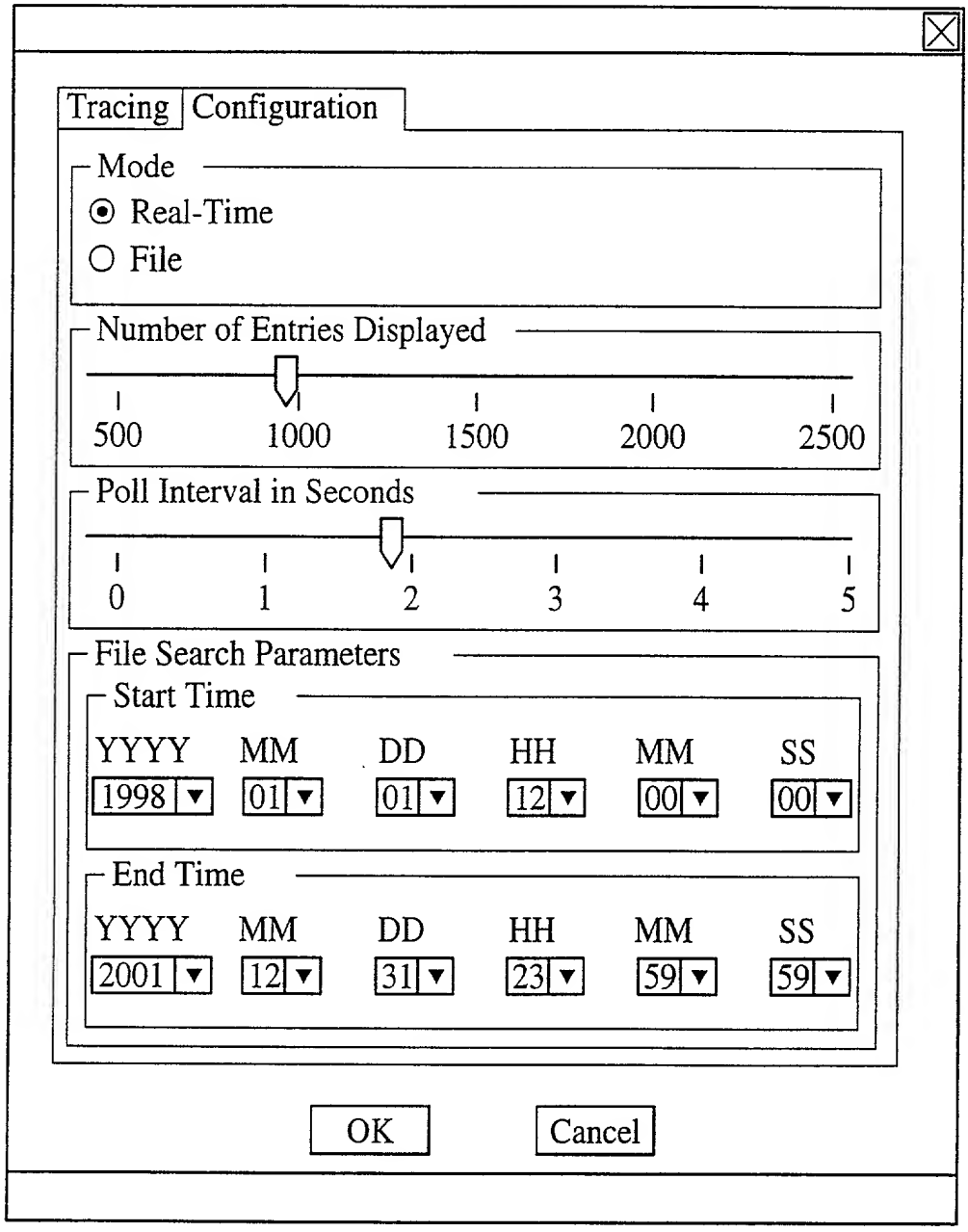

Tracing
Configuration
Level
Standard
Advanced
Available Categories and Filters
Component
AAServer
CDataRep
CTICS
Connection Manager
DSP Manager
Trace Filters
Server
Add
Remove
Clear
Selected Categories and Filters
OK
Cancel
398

FIG. 17G


Tracing
Configuration
Mode
Real-Time
File
Number of Entries Displayed
500
1000
1500
2000
2500
Poll Interval in Seconds
0
1
2
3
4
5
File Search Parameters
Start Time
YYYY
MM
DD
HH
MM
SS
1998
01
01
12
00
00
End Time
YYYY
MM
DD
HH
MM
SS
2001
12
31
23
59
59
OK
Cancel

399

FIG. 17H

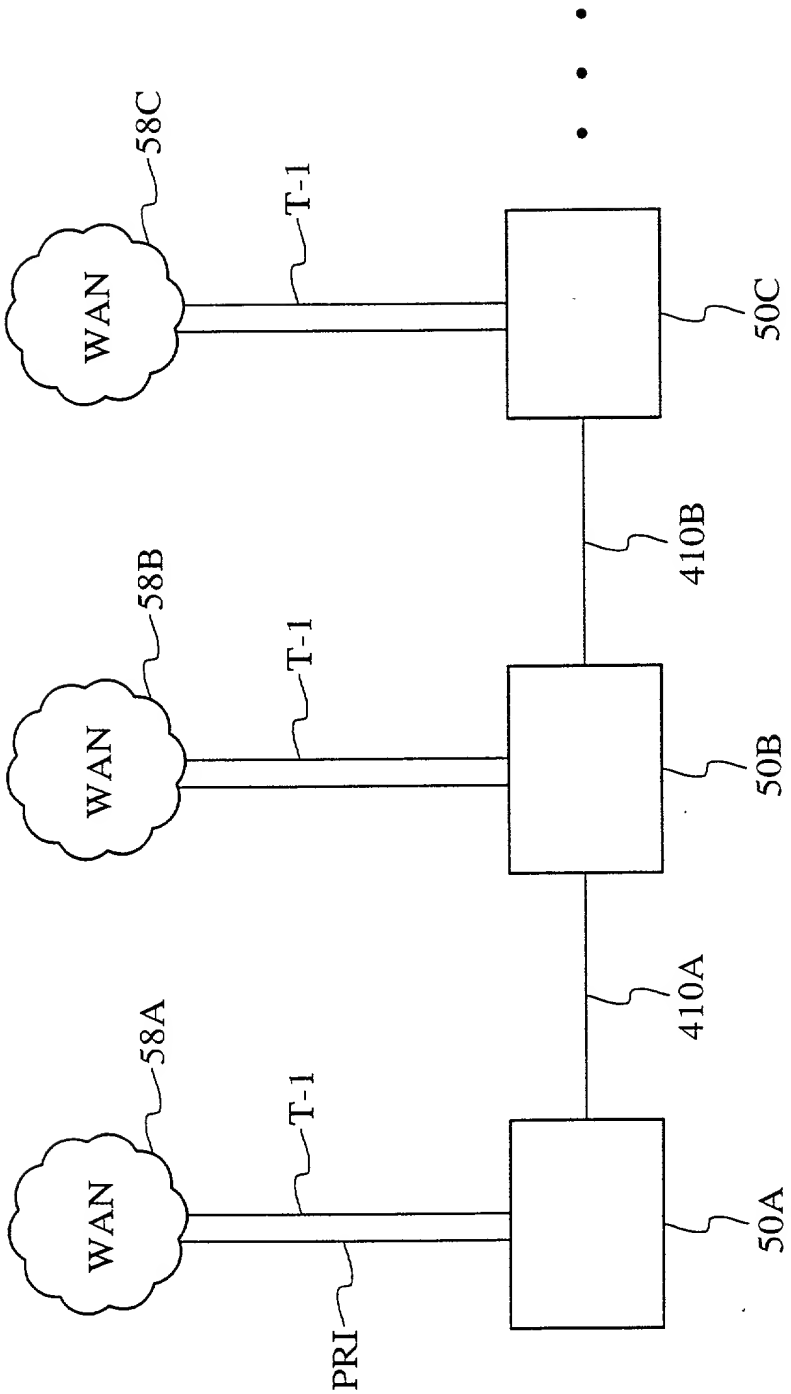


FIG. 18

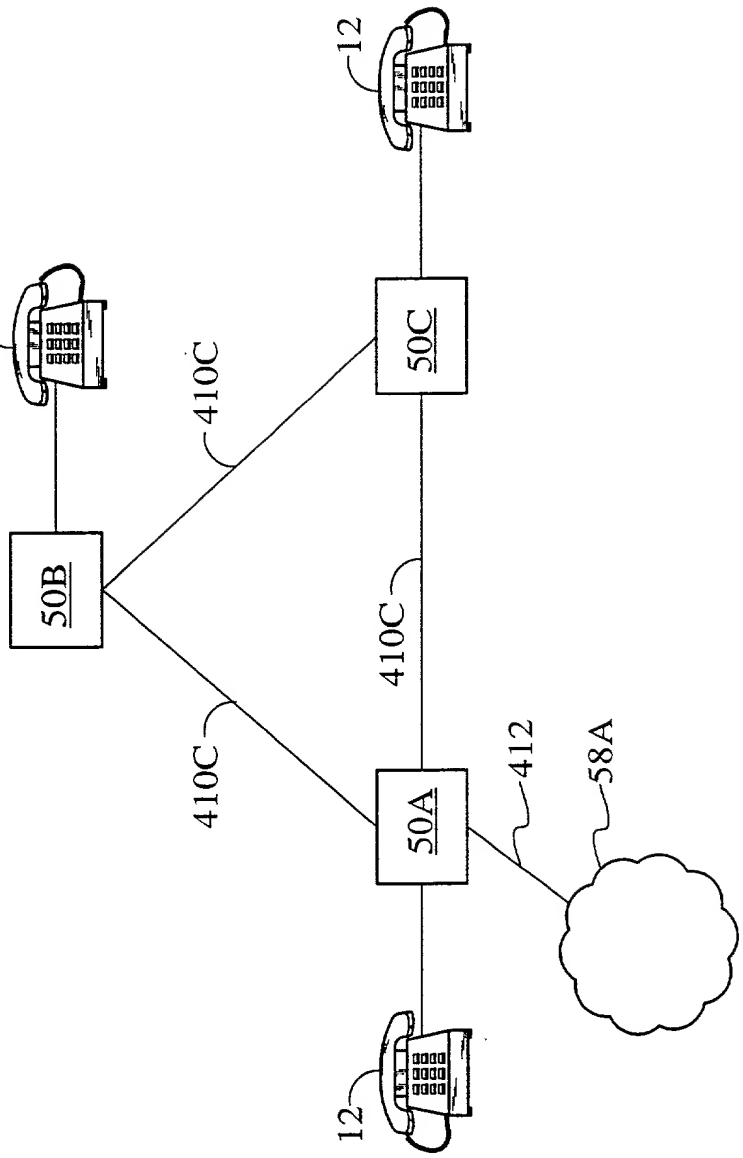


FIG. 19

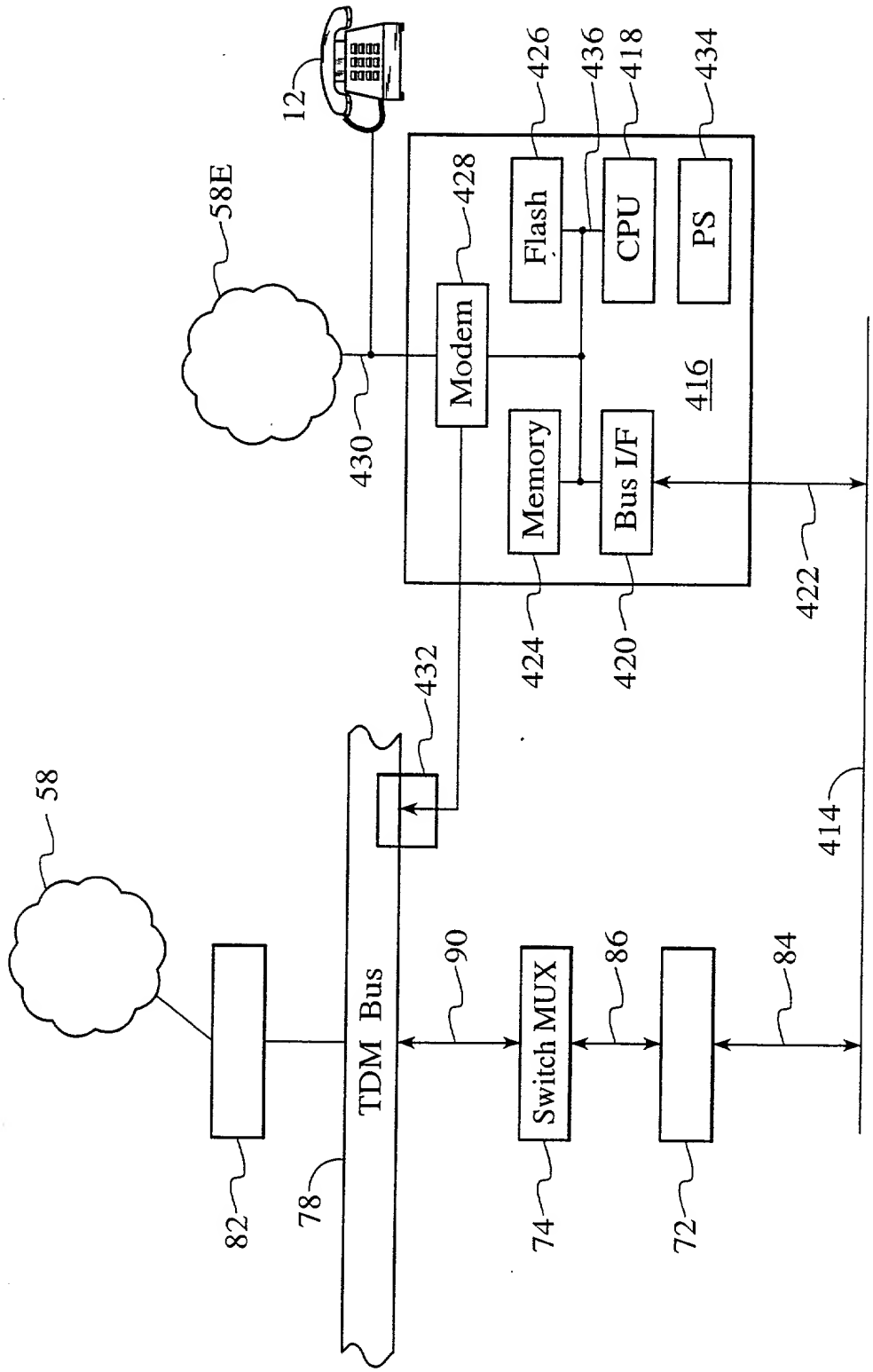

58
82
78
TDM Bus
90
Switch MUX
74
86
72
84
414
422
424
420
432
430
12
58E
428
Modem
Flash
CPU
PS
Memory
Bus I/F
416
426
436
418
434

FIG. 20

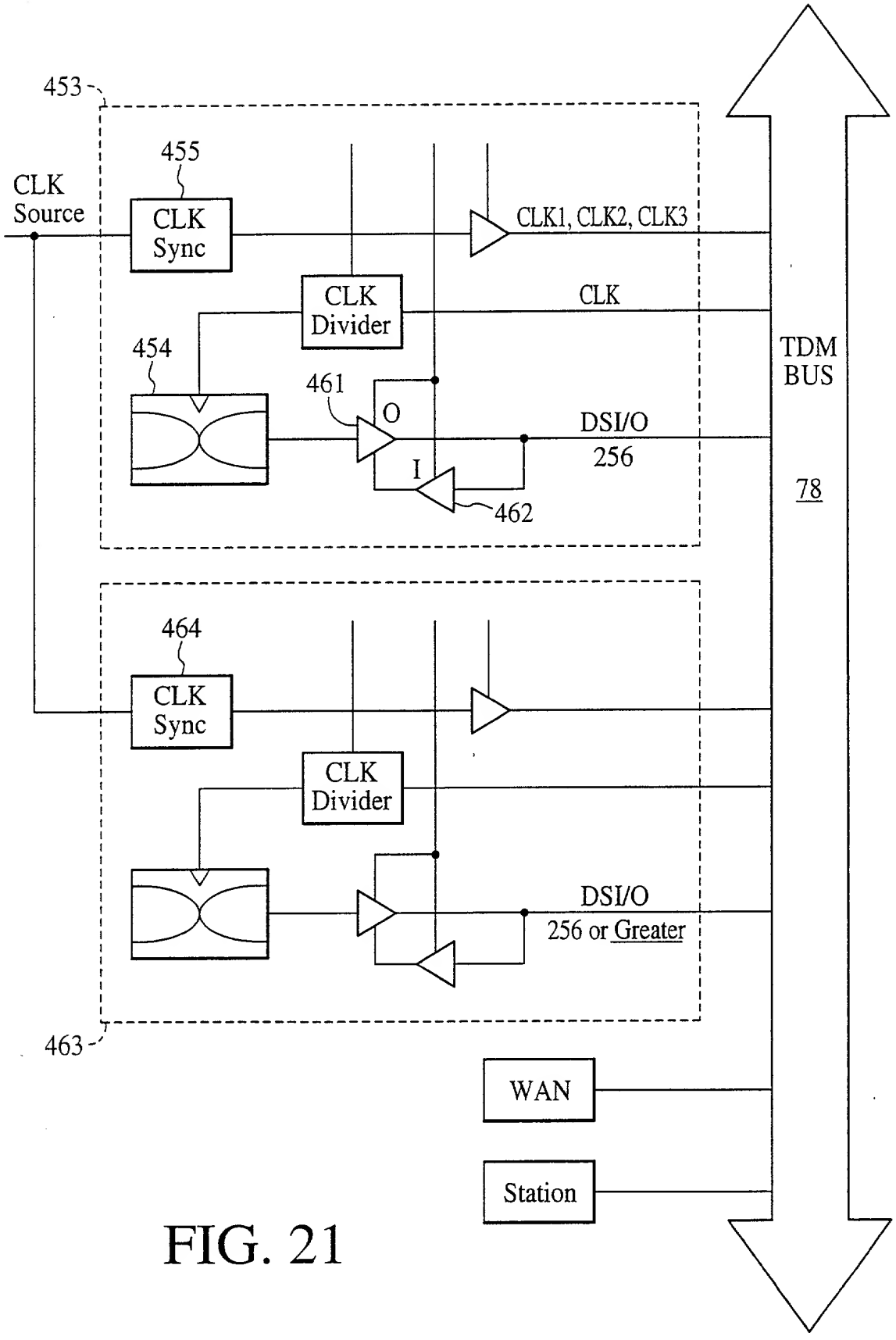

453
455
CLK
Source
CLK
Sync
CLK1, CLK2, CLK3
CLK
Divider
CLK
454
461
O
DSI/O
256
I
462
TDM
BUS
78
464
CLK
Sync
CLK
Divider
DSI/O
256 or Greater
463
WAN
Station

FIG. 21

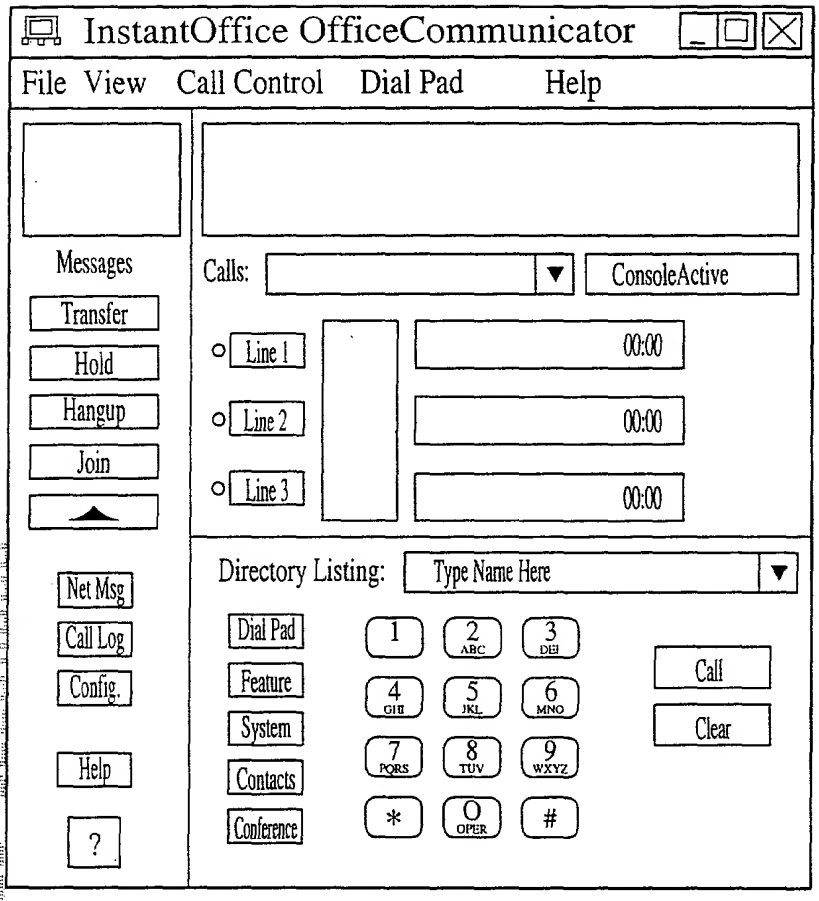

InstantOffice OfficeCommunicator
File View Call Control Dial Pad Help
Messages
Transfer
Hold
Hangup
Join
Net Msg
Call Log
Config.
Help
?
Calls:
ConsoleActive
Line 1
Line 2
Line 3
00:00
00:00
00:00
Directory Listing:
Type Name Here
Dial Pad
Feature
System
Contacts
Conference
1
2 ABC
3 DEF
4 GHI
5 JKL
6 MNO
7 PQRS
8 TUV
9 WXYZ
*
0 OPER
#
Call
Clear

FIG. 22

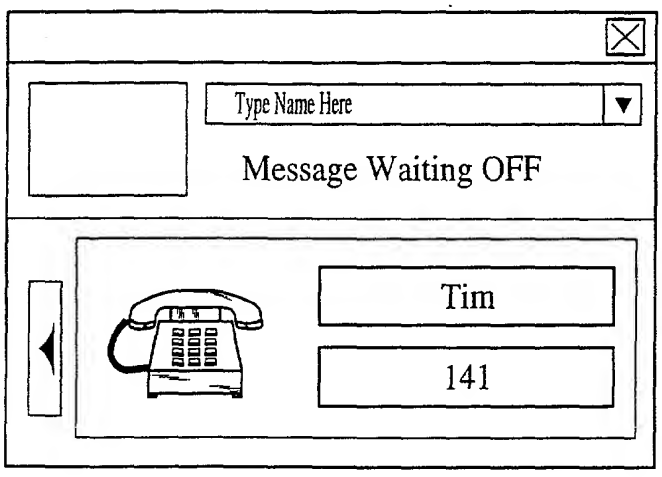

Type Name Here
Message Waiting OFF
Tim
141

FIG. 23

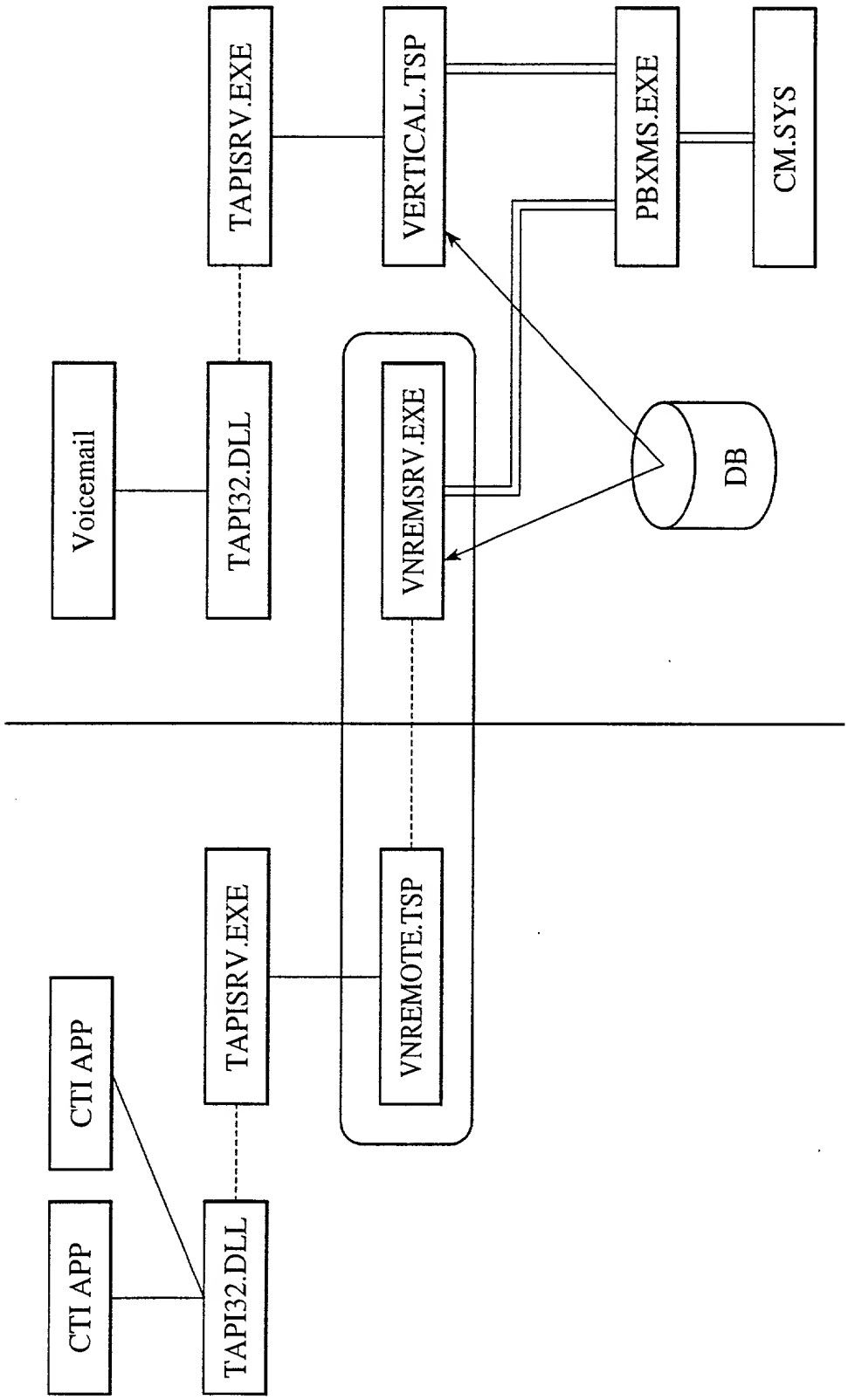

CTI APP
CTI APP
TAPI32.DLL
TAPISRV.EXE
VNREMOTE.TSP
VNREMSRV.EXE
Voicemail
TAPI32.DLL
TAPISRV.EXE
VERTICAL.TSP
DB
PBXMS.EXE
CM.SYS

FIG. 24

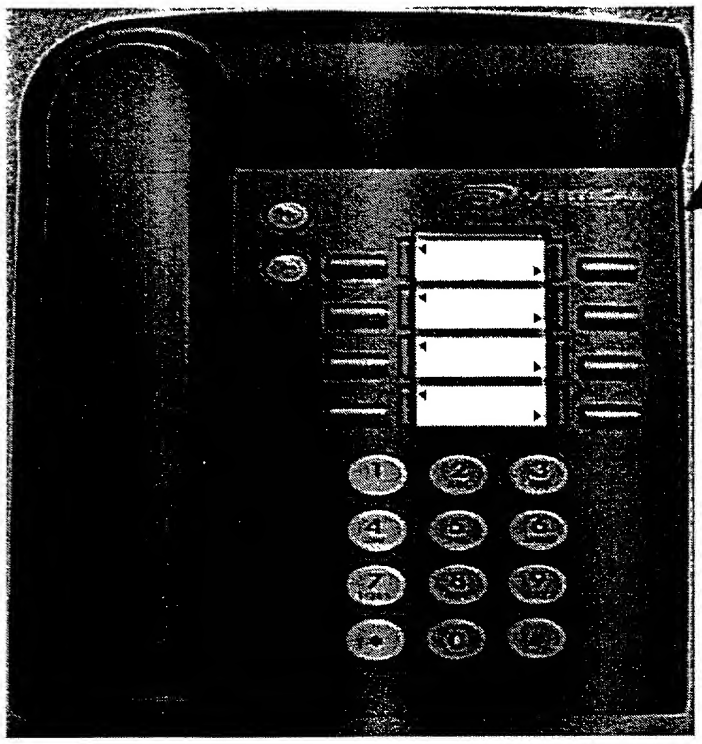


FIG. 25

FIG. 26

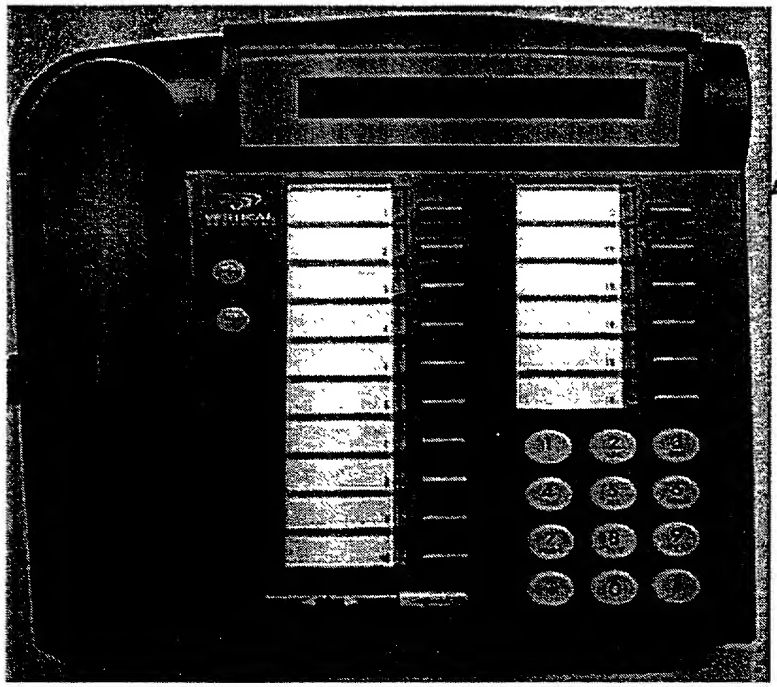
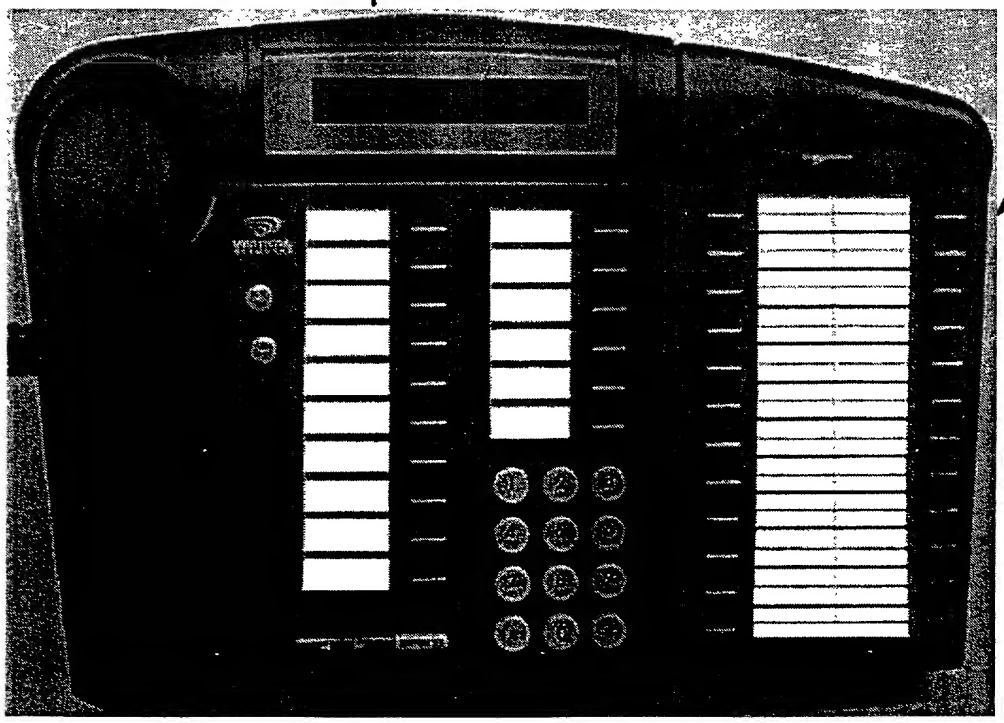


FIG. 27

FIG. 28



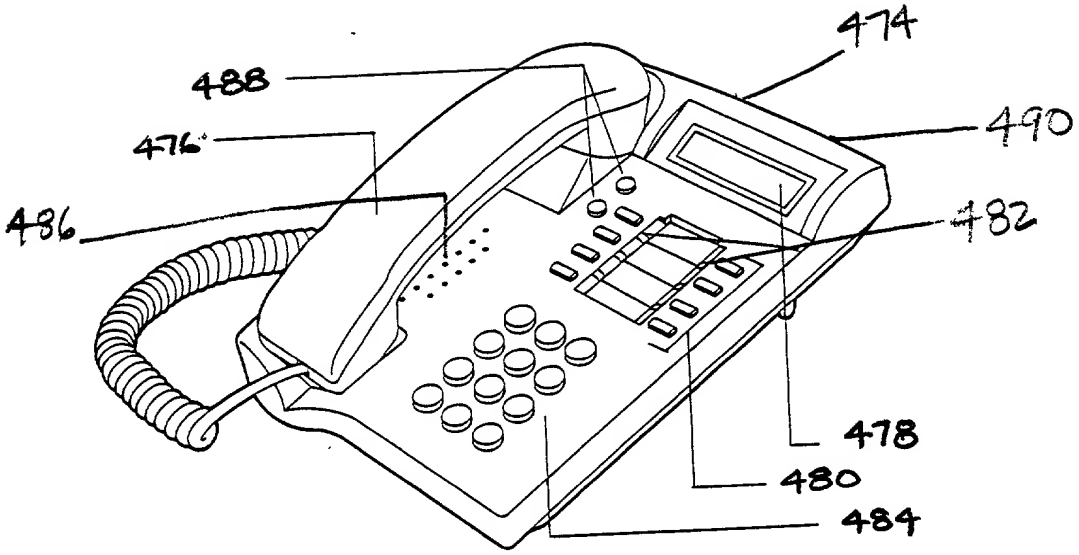


FIG. 29

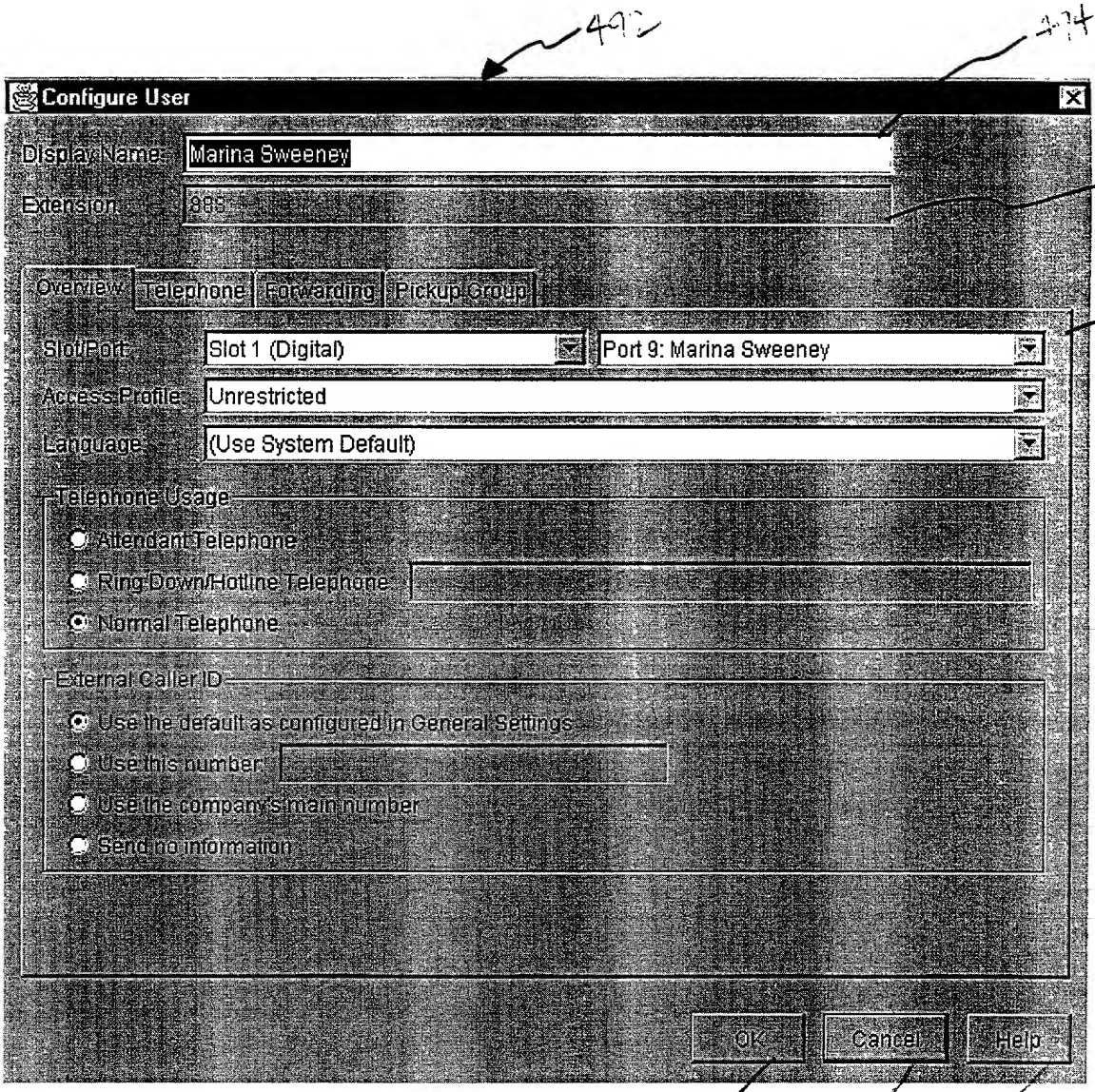

Configure User
Display Name:
Marina Sweeney
Extension:
Overview
Telephone
Forwarding
Pickup Group
Slot/Port:
Slot 1 (Digital)
Port 9: Marina Sweeney
Access Profile:
Unrestricted
Language:
(Use System Default)
Telephone Usage
Attendant Telephone
Ring Down/Hotline Telephone
Normal Telephone
External Caller ID
Use the default as configured in General Settings
Use this number
Use the company's main number
Send no information
OK
Cancel
Help
492
494
496
504
493
500
502

FIG. 30

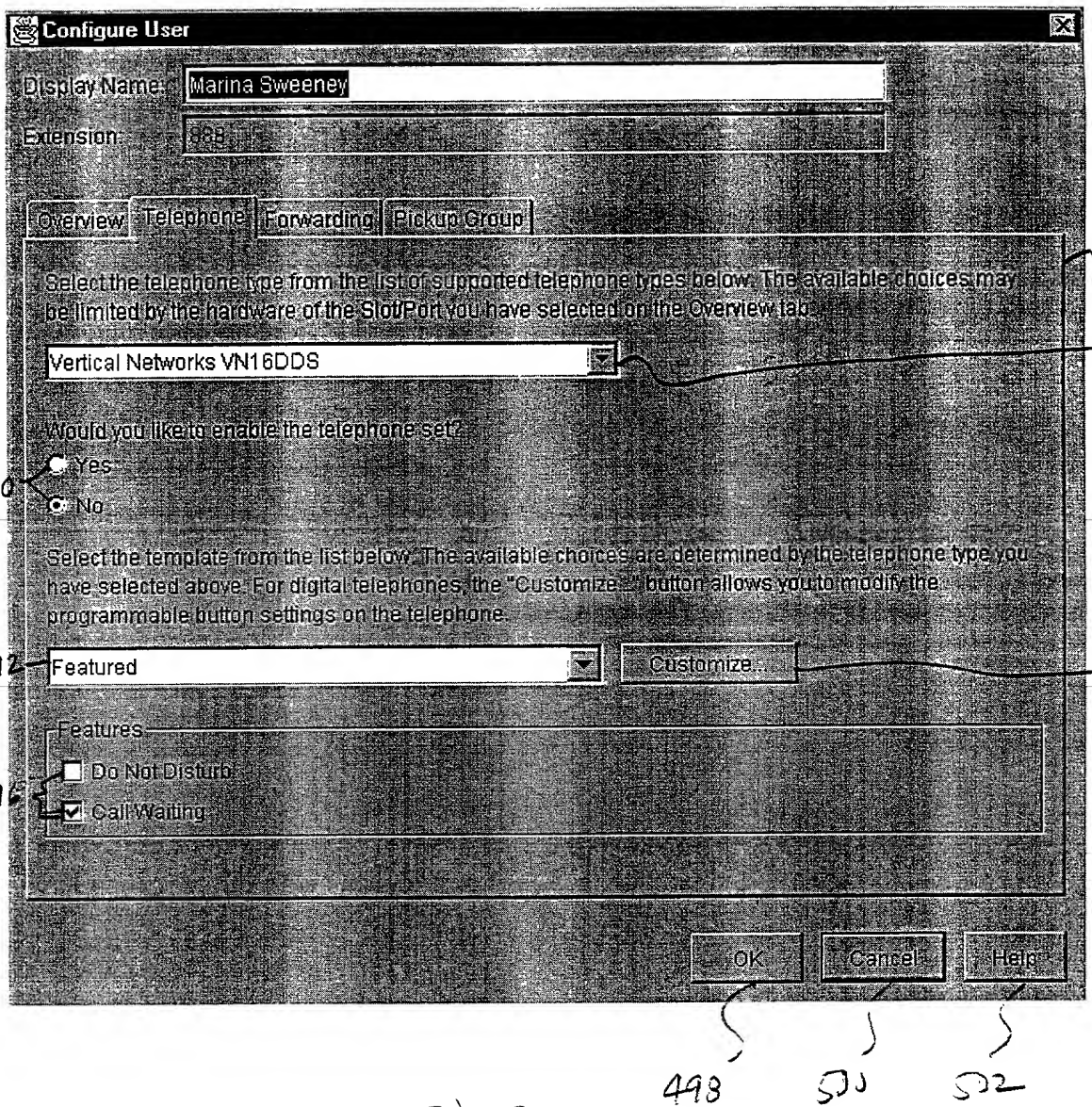

Configure User
Display Name:
Marina Sweeney
Extension:
888
Overview
Telephone
Forwarding
Pickup Group
506
Select the telephone type from the list of supported telephone types below. The available choices may be limited by the hardware of the SlotPort you have selected on the Overview tab.
508
Vertical Networks VN16DDS
Would you like to enable the telephone set?
Yes
No
510
Select the template from the list below. The available choices are determined by the telephone type you have selected above. For digital telephones, the "Customize..." button allows you to modify the programmable button settings on the telephone.
512
Featured
Customize...
514
Features
Do Not Disturb
Call Waiting
516
OK
Cancel
Help
498
500
502

Fig. 31

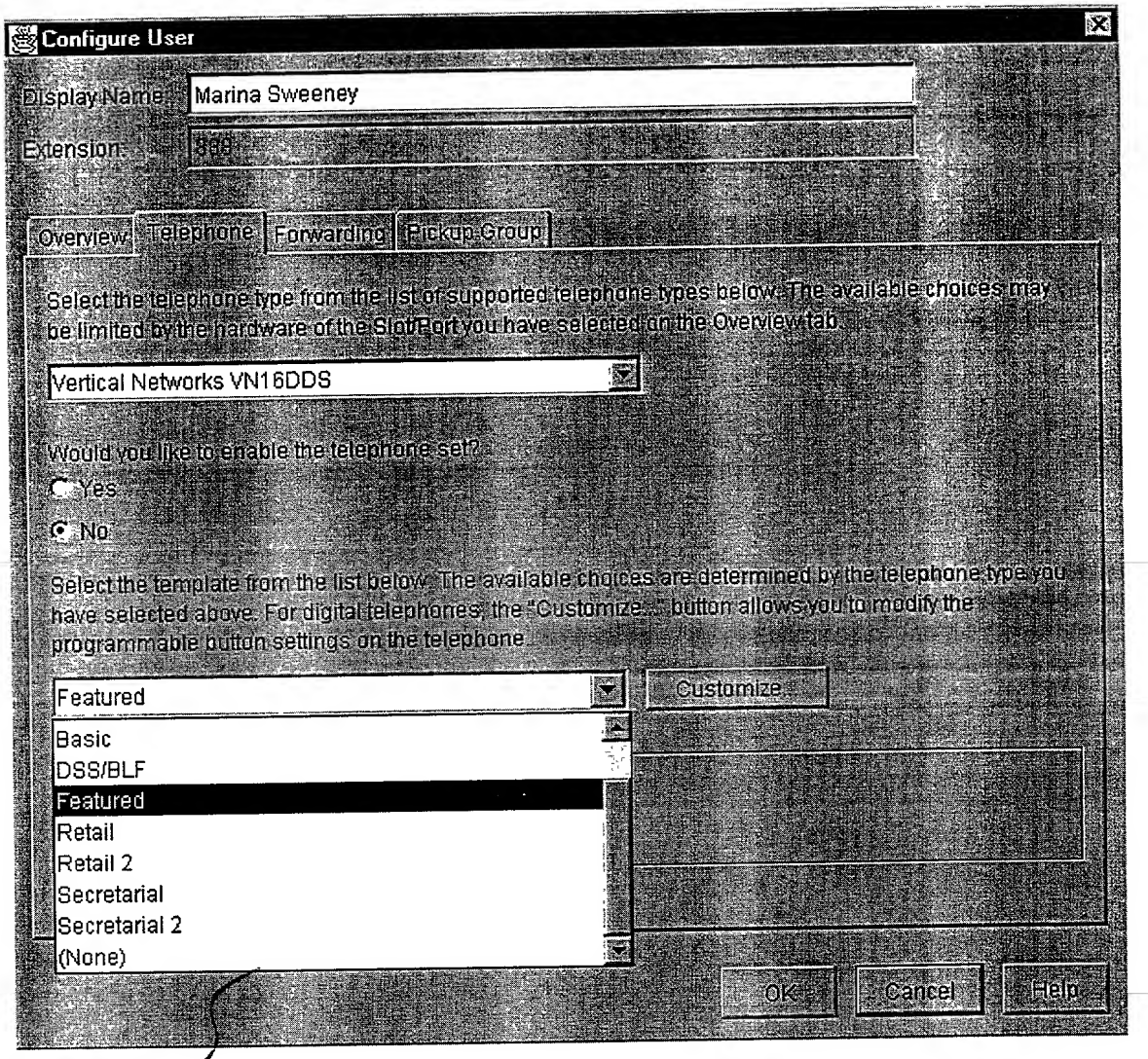

Configure User
Display Name: Marina Sweeney
Extension: 3000
Overview
Telephone
Forwarding
Pickup Group
Select the telephone type from the list of supported telephone types below. The available choices may be limited by the hardware of the SlotPort you have selected on the Overview tab.
Vertical Networks VN16DDS
Would you like to enable the telephone set?
Yes
No
Select the template from the list below. The available choices are determined by the telephone type you have selected above. For digital telephones, the "Customize..." button allows you to modify the programmable button settings on the telephone.
Featured
Customize...
Basic
DSS/BLF
Featured
Retail
Retail 2
Secretarial
Secretarial 2
(None)
OK
Cancel
Help
512

FIG. 32

Vertical Networks VN16DDS Featured
Primary
888
Call Waiting
Page
System Park
Redial
Group Pickup
Do Not Disturb
Flash
Conference
Voice Call
Release
Message Waiting
550
User Forward
Transfer
Hold
Speaker/Mute
OK
Cancel

FIG. 33 518

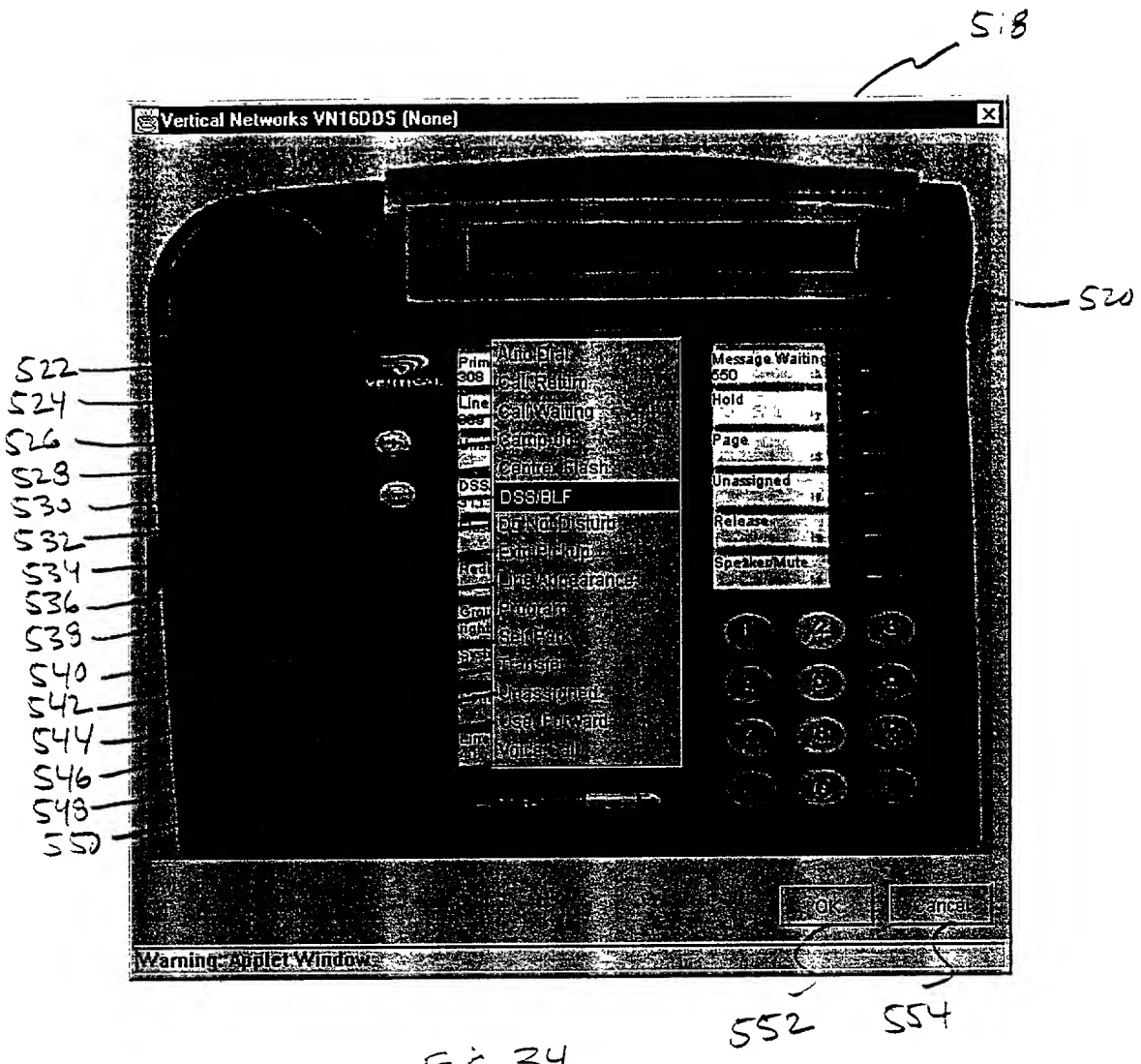

518
Vertical Networks VN16DDS (None)
520
522
524
526
528
530
532
534
536
539
540
542
544
546
548
550
Prim
308
Line
DSS
DSS/BLF
Message Waiting
550
Hold
Page
Unassigned
Release
Speaker Mute
OK
Cancel
Warning: Applet Window
552
554

FIG. 34

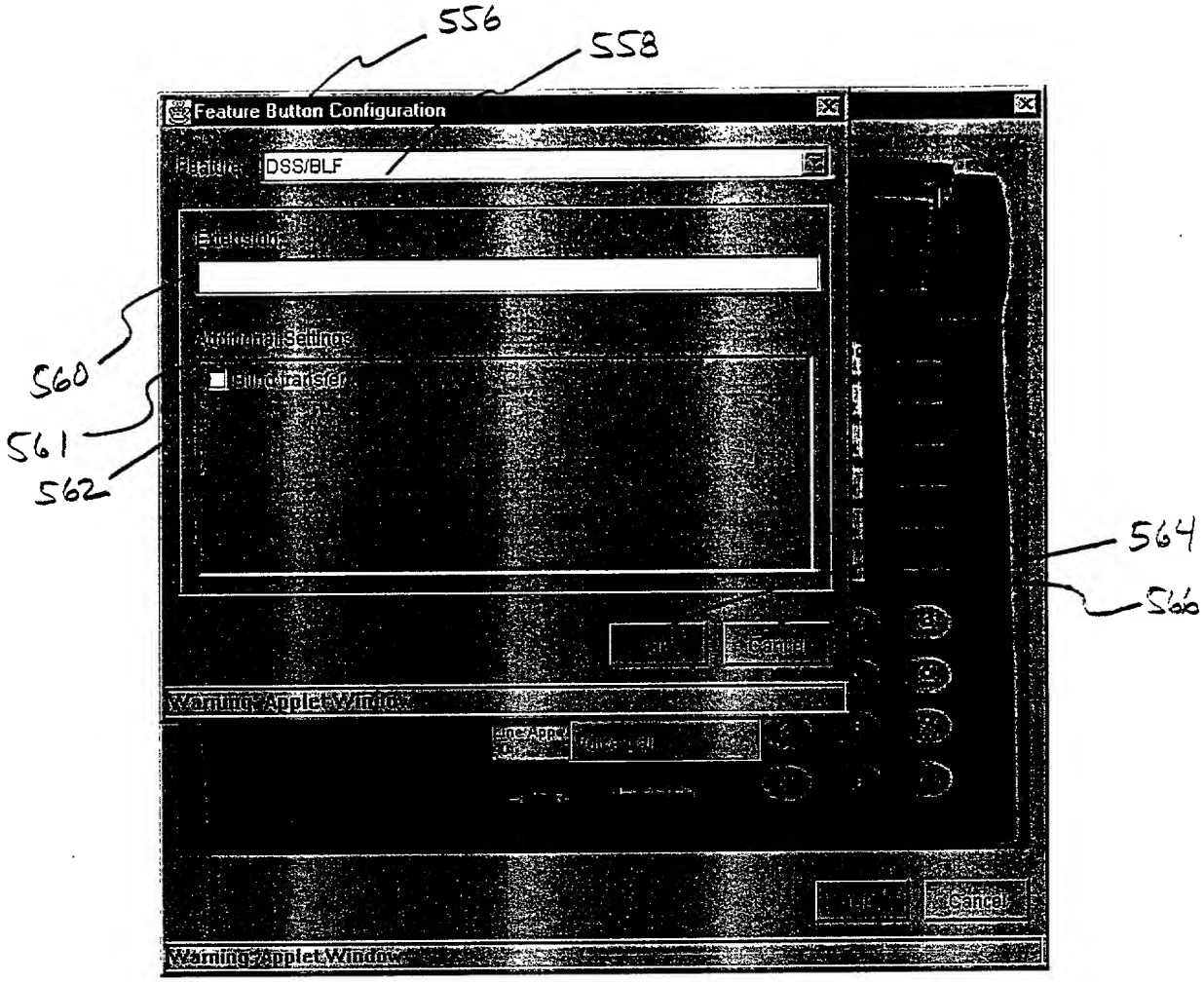

556
558
Feature Button Configuration
Feature
DSS/BLF
Extension
Additional Settings
560
561
562
564
566
Cancel
Warning: Applet Window
Cancel
Warning: Applet Window

Fig. 35

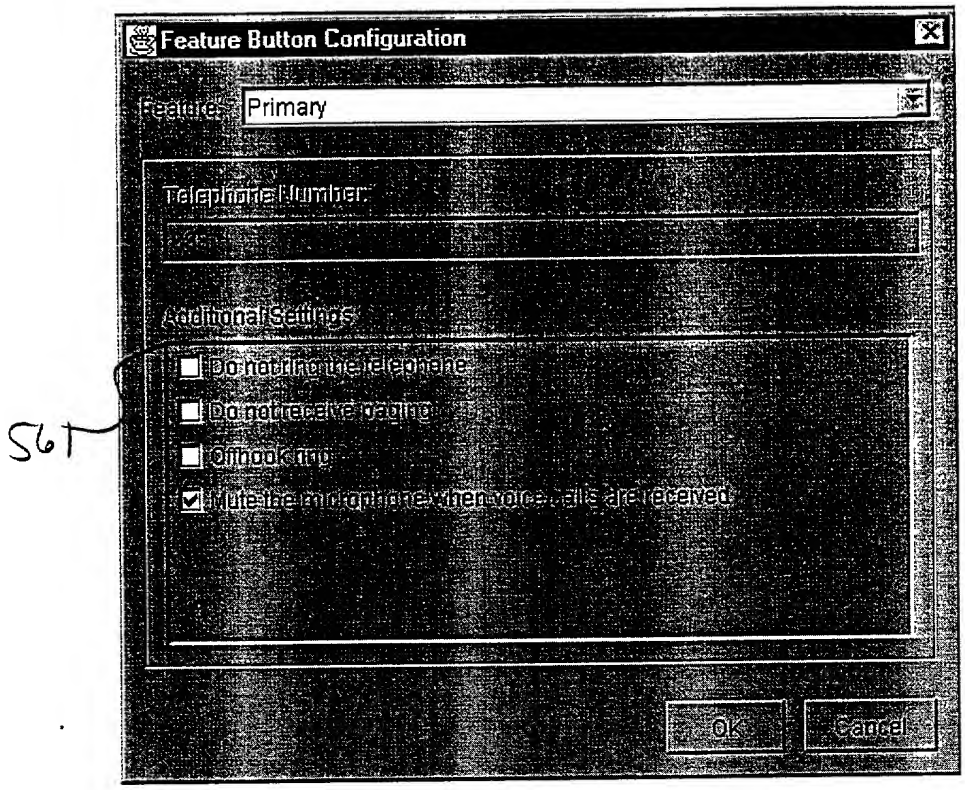

Feature Button Configuration
Feature:
Primary
Telephone Number:
Additional Settings:
Do not ring the telephone
Do not receive paging
Offhook app
Mute the microphone when voice calls are received
OK
Cancel
56

FIG. 36

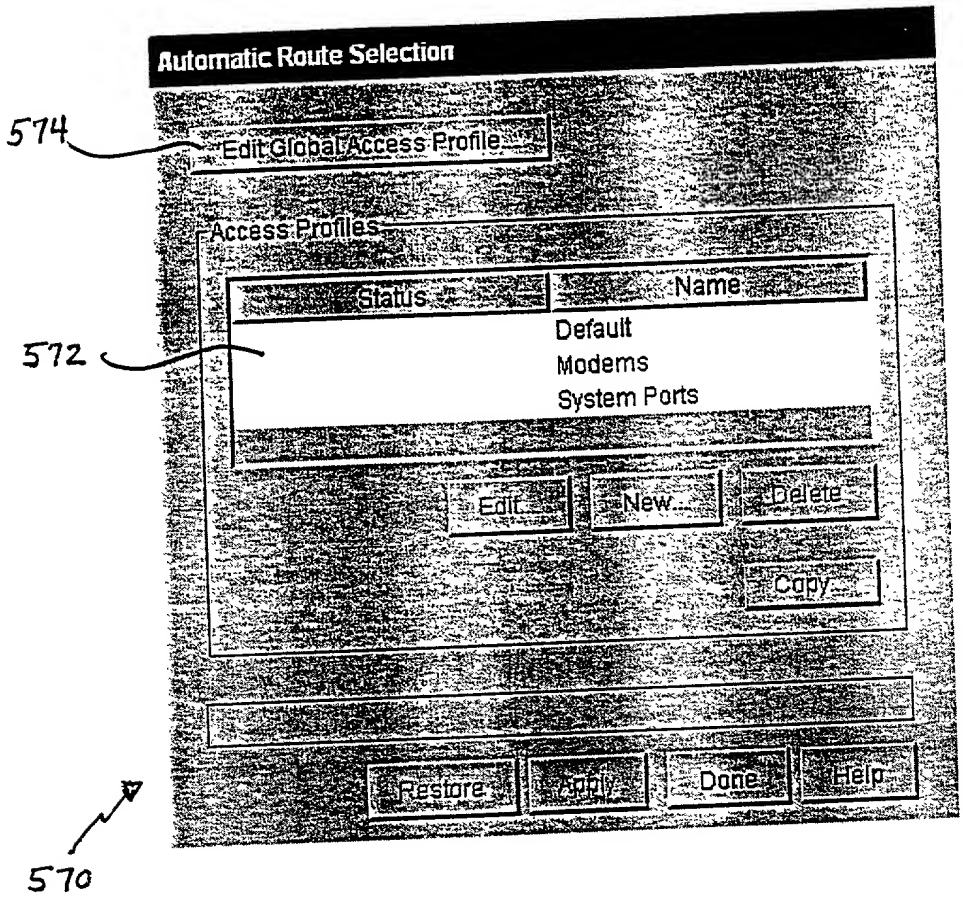

Automatic Route Selection
574
Edit Global Access Profile...
Access Profiles
Status
Name
572
Default
Modems
System Ports
Edit...
New...
Delete
Copy...
Restore
Apply
Done
Help
570

FIG. 37

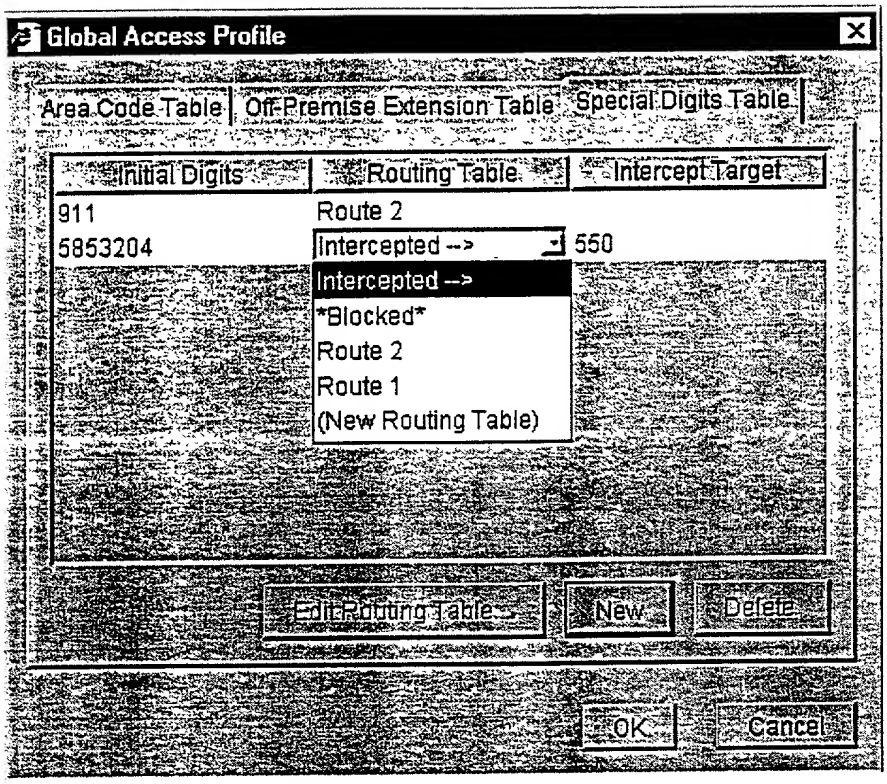

Global Access Profile
Area Code Table
Off-Premise Extension Table
Special Digits Table
Initial Digits
Routing Table
Intercept Target
911
Route 2
5853204
Intercepted -->
550
Intercepted -->
Blocked
Route 2
Route 1
(New Routing Table)
Edit Routing Table...
New
Delete
OK
Cancel

Fig. 38A

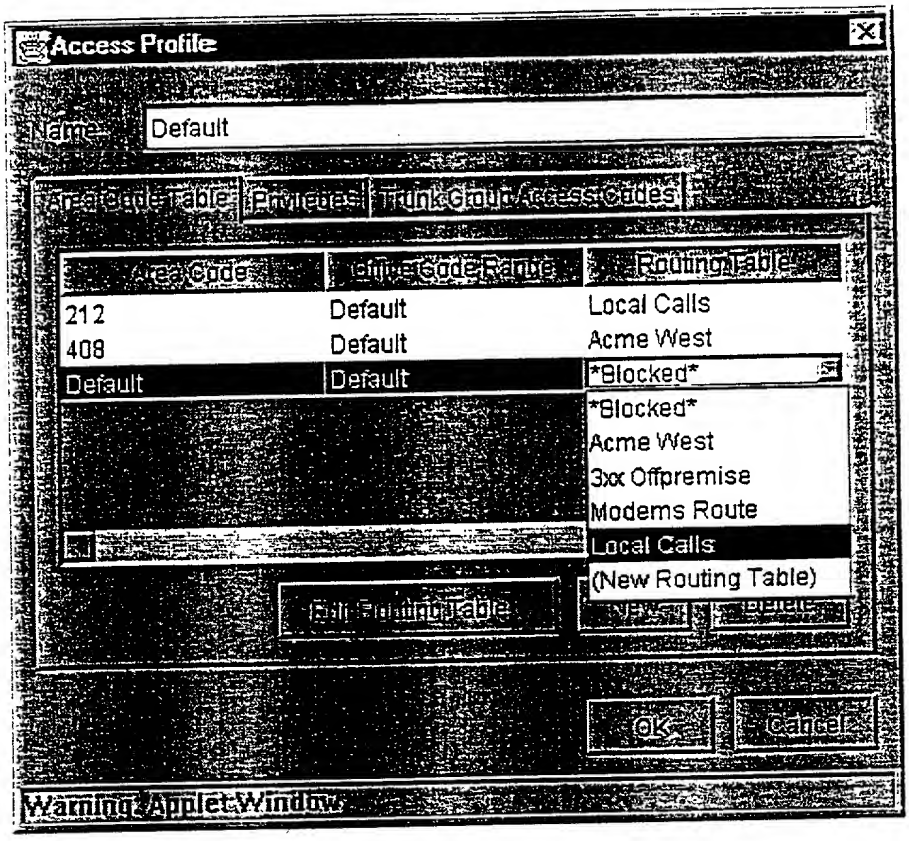

Access Profile
Name:
Default
Area Code Table
Privileges
Trunk Group Access Codes
Area Code
Office Code Range
Routing Table
212
Default
Local Calls
408
Default
Acme West
Default
Default
Blocked
Blocked
Acme West
3xx Offpremise
Modems Route
Local Calls
(New Routing Table)
Edit Routing Table
New...
Delete
OK
Cancel
Warning: Applet Window

FIG. 38B

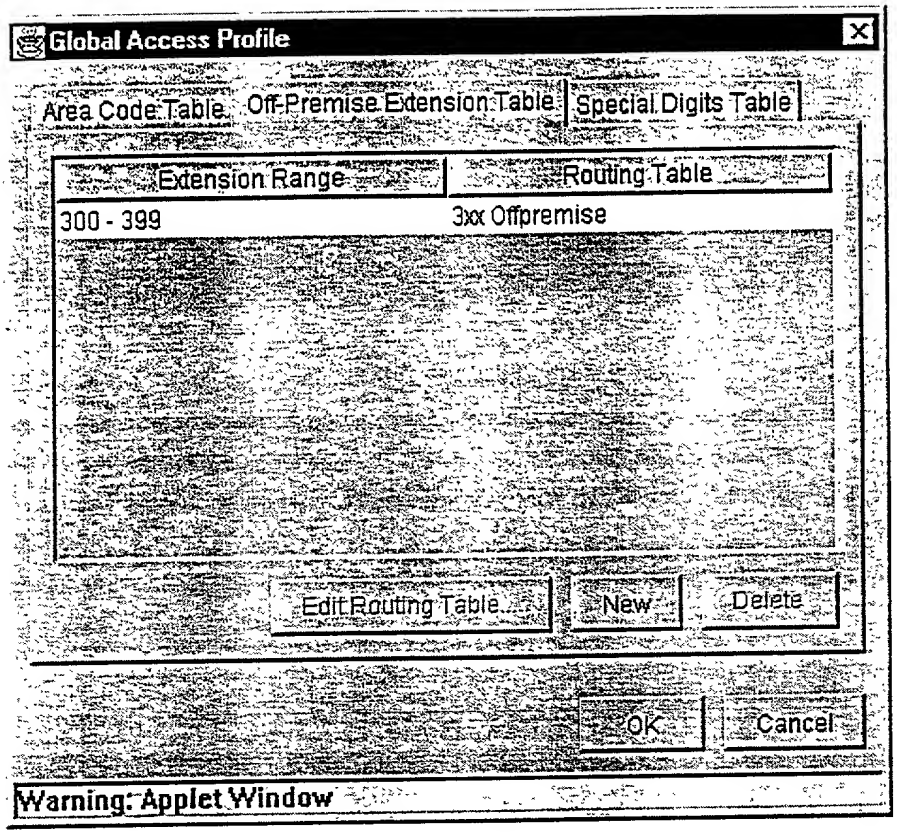

Global Access Profile
Area Code Table
Off-Premise Extension Table
Special Digits Table
Extension Range
Routing Table
300 - 399
3xx Offpremise
Edit Routing Table...
New
Delete
OK
Cancel
Warning: Applet Window

Fig. 38c

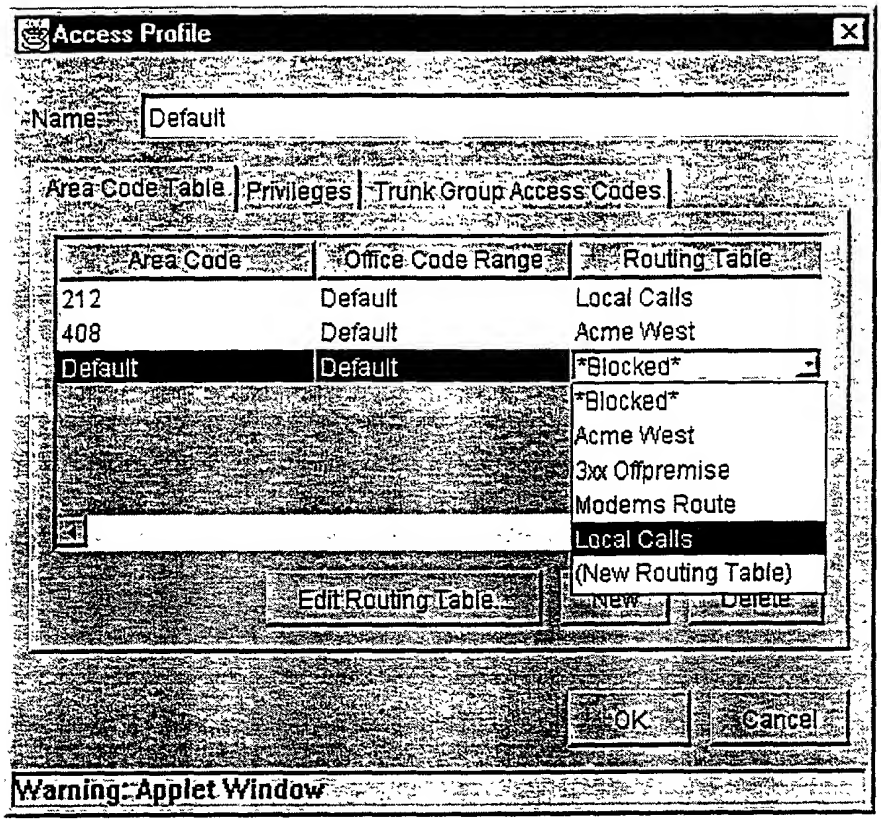

Access Profile
Name: Default
Area Code Table
Privileges
Trunk Group Access Codes
Area Code
Office Code Range
Routing Table
212
Default
Local Calls
408
Default
Acme West
Default
Default
Blocked
Blocked
Acme West
3xx Offpremise
Modems Route
Local Calls
(New Routing Table)
Edit Routing Table
New
Delete
OK
Cancel
Warning: Applet Window

FIG. 39A

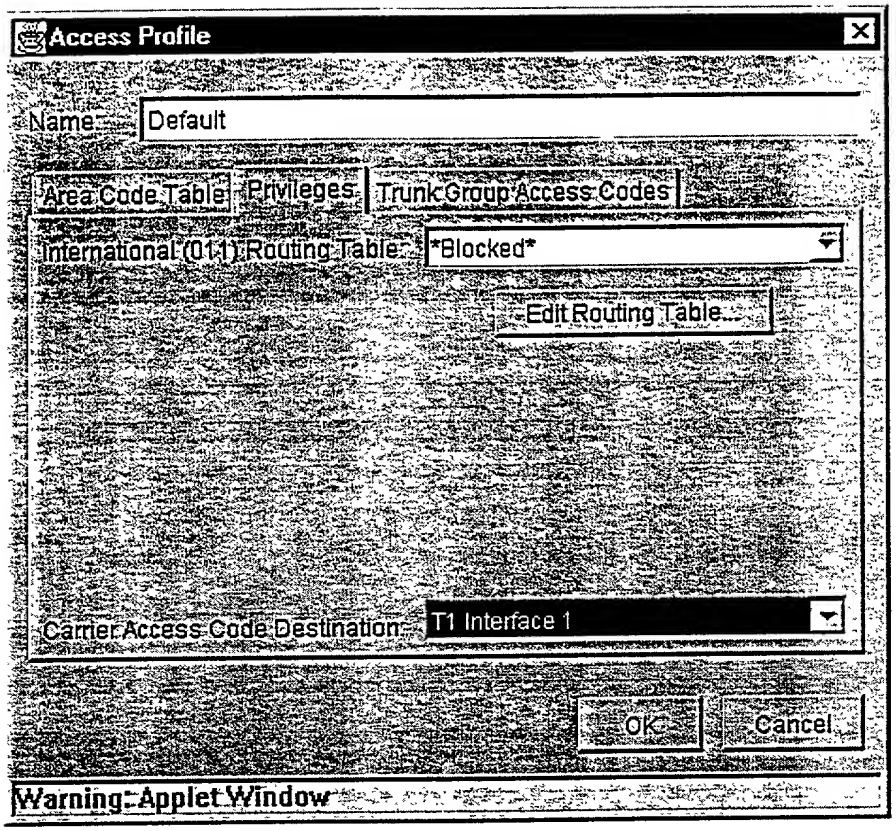

Access Profile
Name:
Default
Area Code Table
Privileges
Trunk Group Access Codes
International (011) Routing Table:
Blocked
Edit Routing Table...
Carrier Access Code Destination:
T1 Interface 1
OK
Cancel
Warning: Applet Window

FIG. 39B

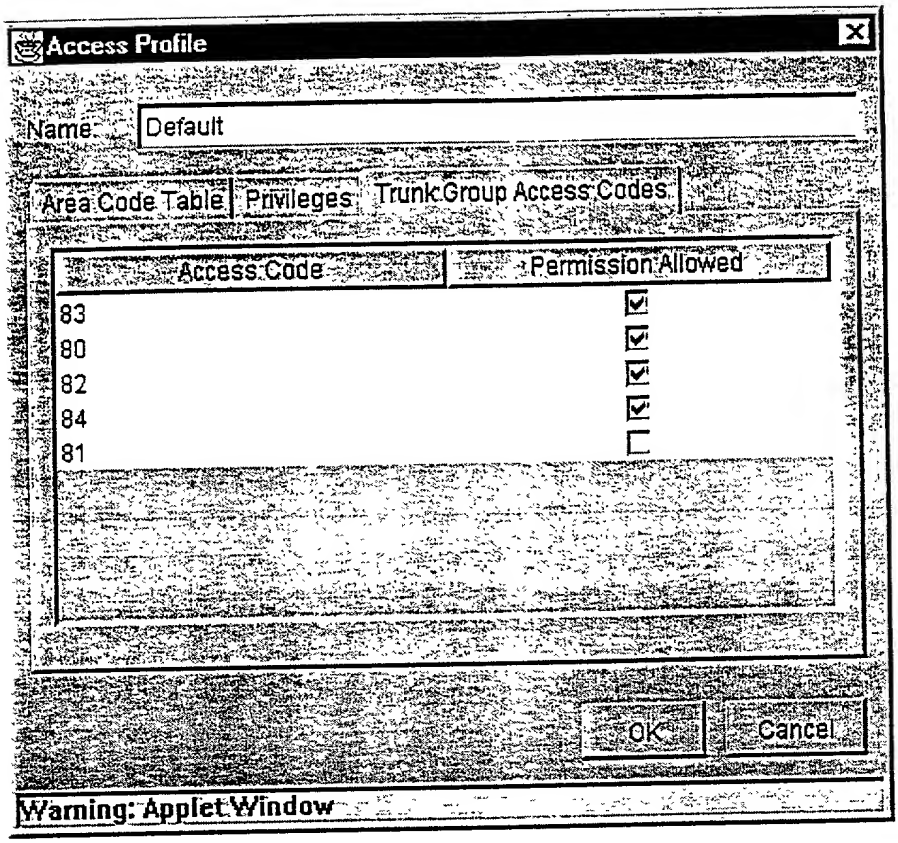

Access Profile
Name:
Default
Area Code Table
Privileges
Trunk Group Access Codes
Access Code
Permission Allowed
83
80
82
84
81
OK
Cancel
Warning: Applet Window

FIG. 39c

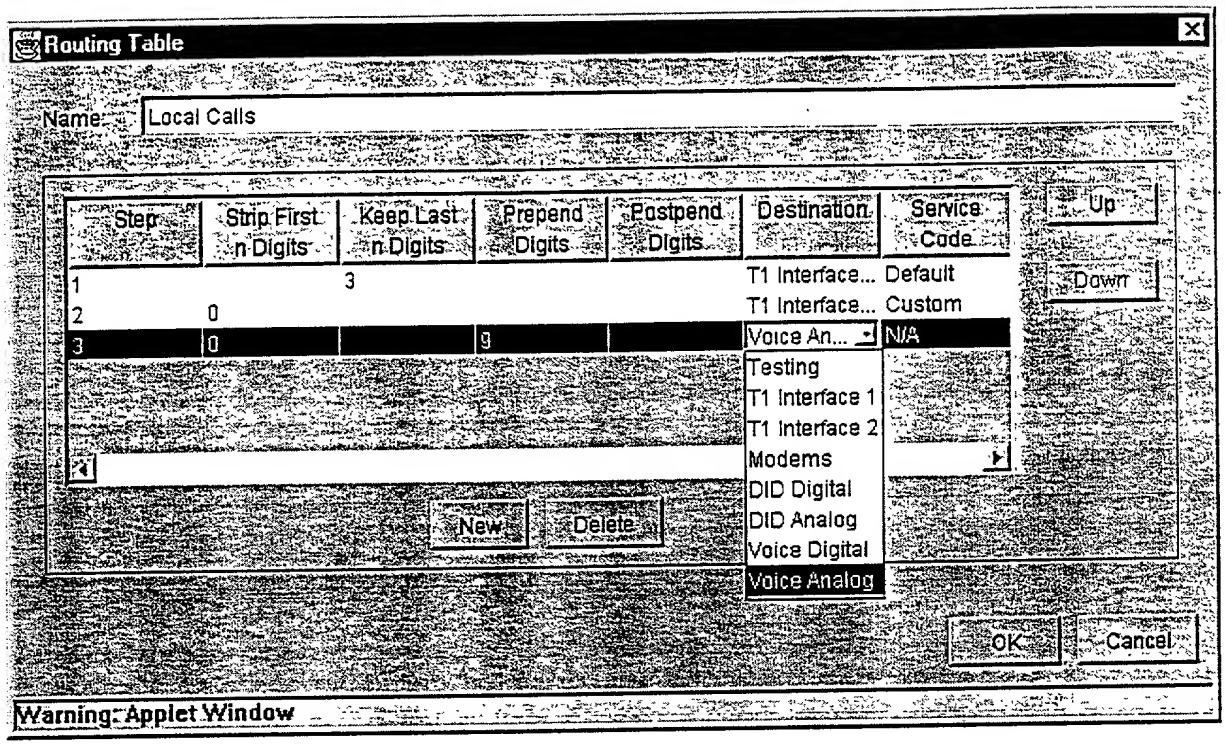

Routing Table
Name: Local Calls
Step
Strip First n Digits
Keep Last n Digits
Prepend Digits
Postpend Digits
Destination
Service Code
Up
Down
1 3 T1 Interface... Default
2 0 T1 Interface... Custom
3 0 9 Voice An... N/A
Testing
T1 Interface 1
T1 Interface 2
Modems
DID Digital
DID Analog
Voice Digital
Voice Analog
New
Delete
OK
Cancel
Warning: Applet Window

FIG. 40

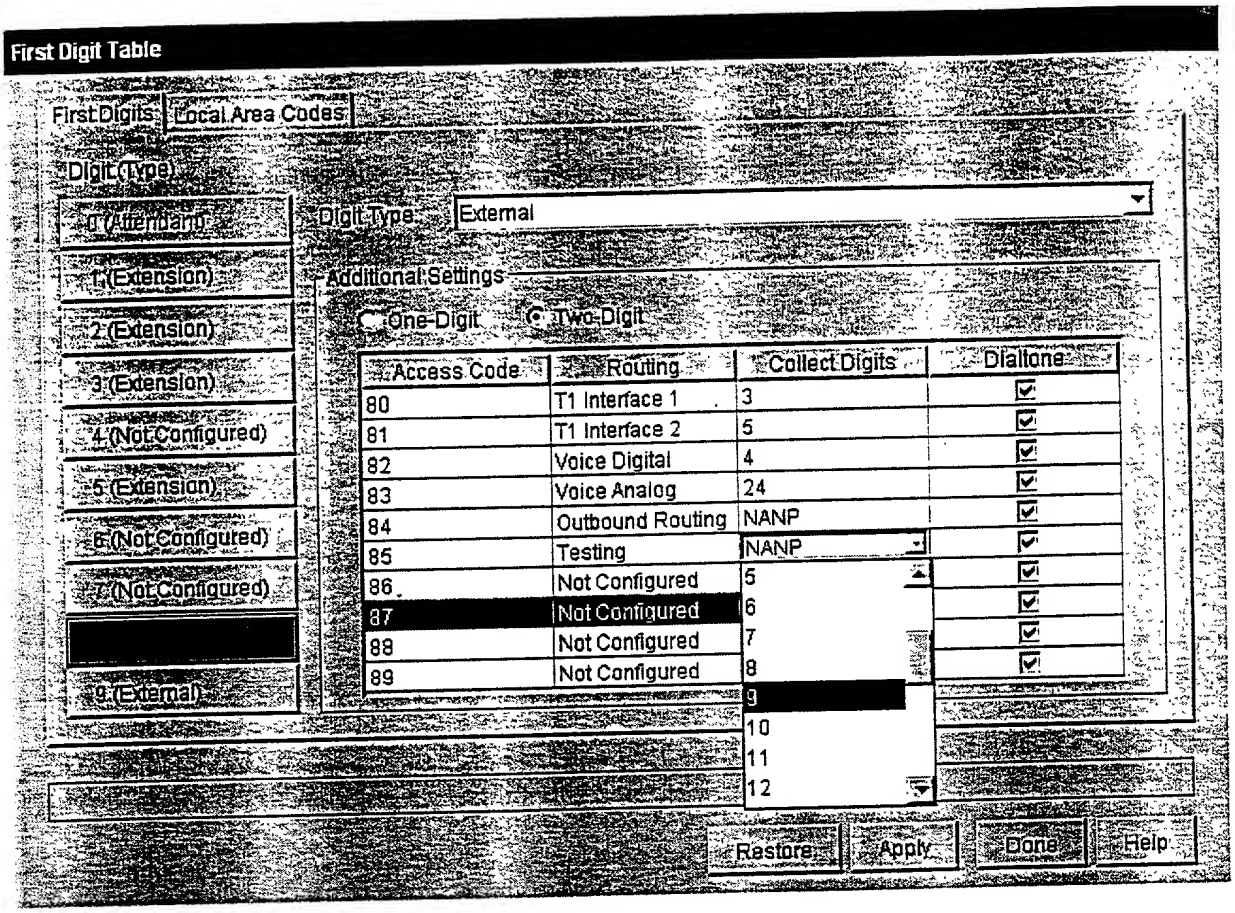

First Digit Table
First Digits
Local Area Codes
Digit Type
0 (Attendant)
1 (Extension)
2 (Extension)
3 (Extension)
4 (Not Configured)
5 (Extension)
6 (Not Configured)
7 (Not Configured)
9 (External)
Digit Type: External
Additional Settings
One-Digit
Two-Digit
Access Code
Routing
Collect Digits
Dialtone
80 T1 Interface 1 3
81 T1 Interface 2 5
82 Voice Digital 4
83 Voice Analog 24
84 Outbound Routing NANP
85 Testing NANP
86 Not Configured
87 Not Configured
88 Not Configured
89 Not Configured
5
6
7
8
9
10
11
12
Restore
Apply
Done
Help

FIG. 41

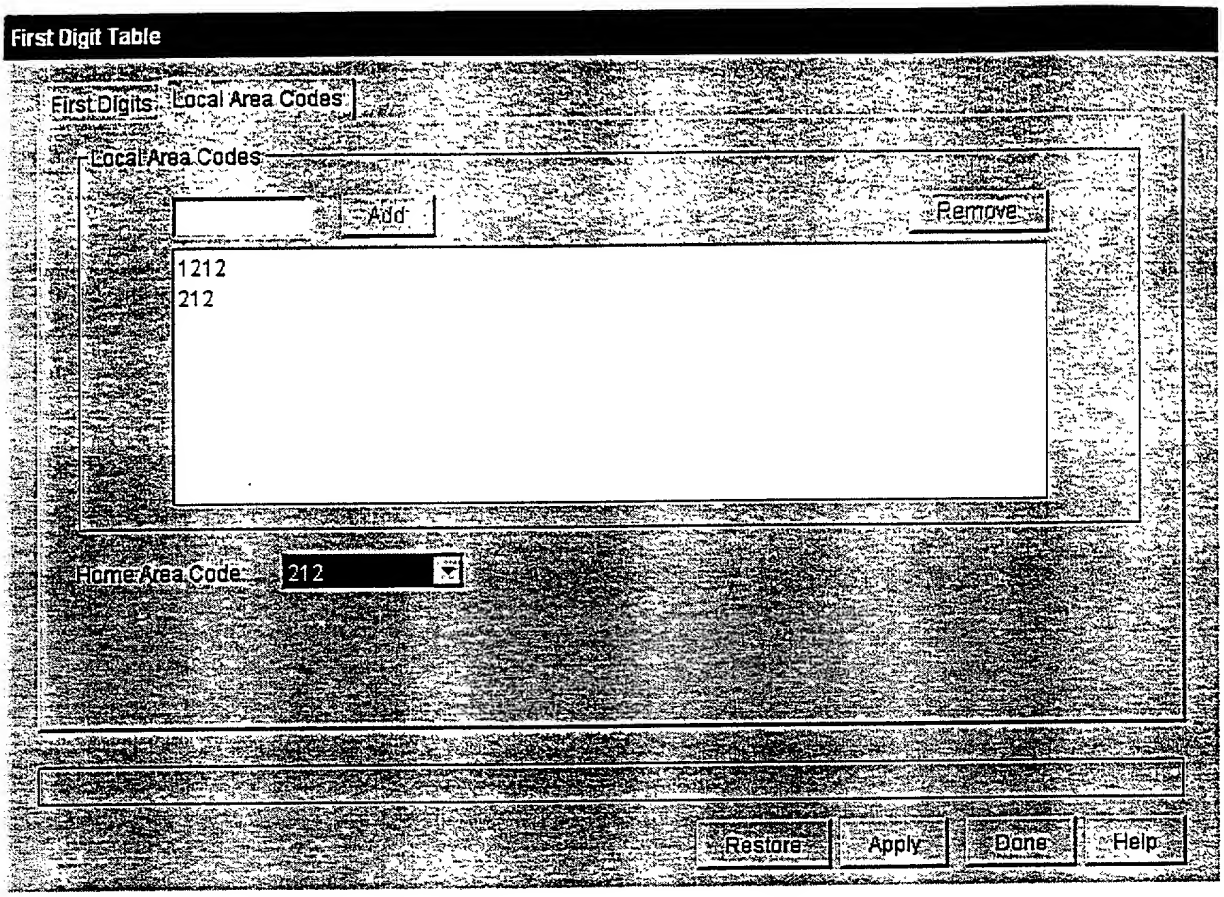

First Digit Table
First Digits:
Local Area Codes
Local Area Codes
Add
Remove
1212
212
Home Area Code:
212
Restore
Apply
Done
Help

FIG. 42

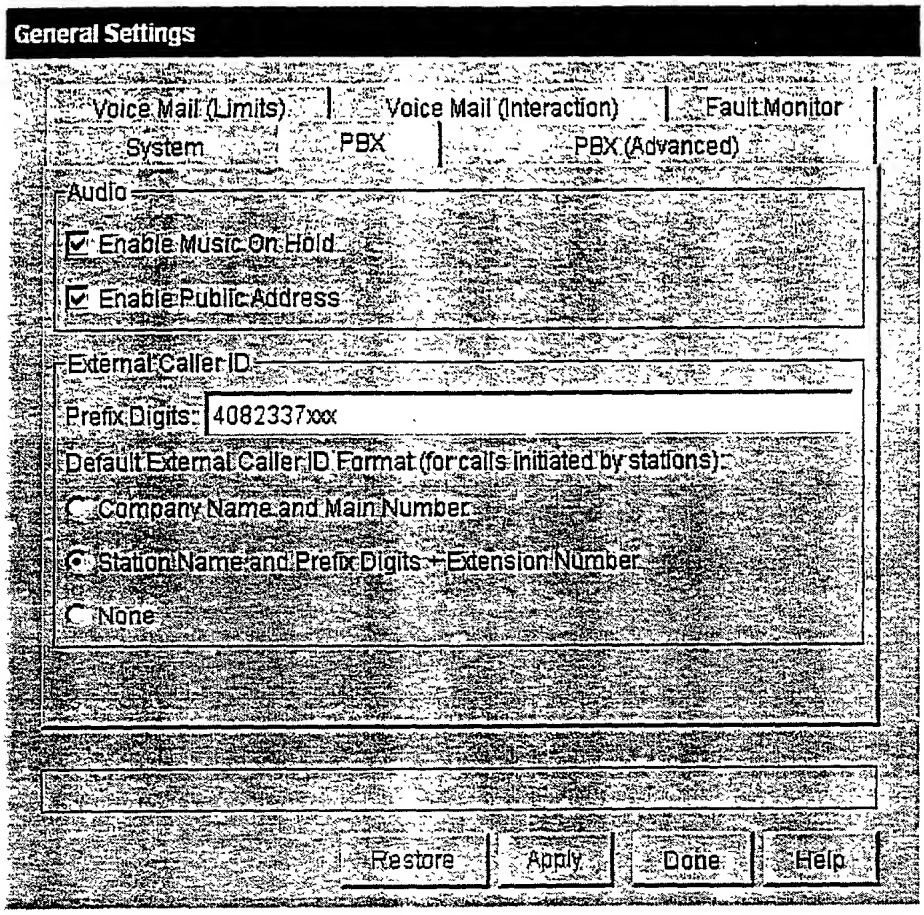

General Settings
Voice Mail (Limits)
Voice Mail (Interaction)
Fault Monitor
System
PBX
PBX (Advanced)
Audio
Enable Music On Hold
Enable Public Address
External Caller ID
Prefix Digits:
4082337xxx
Default External Caller ID Format (for calls initiated by stations):
Company Name and Main Number
Station Name and Prefix Digits + Extension Number
None
Restore
Apply
Done
Help

FIG. 43A

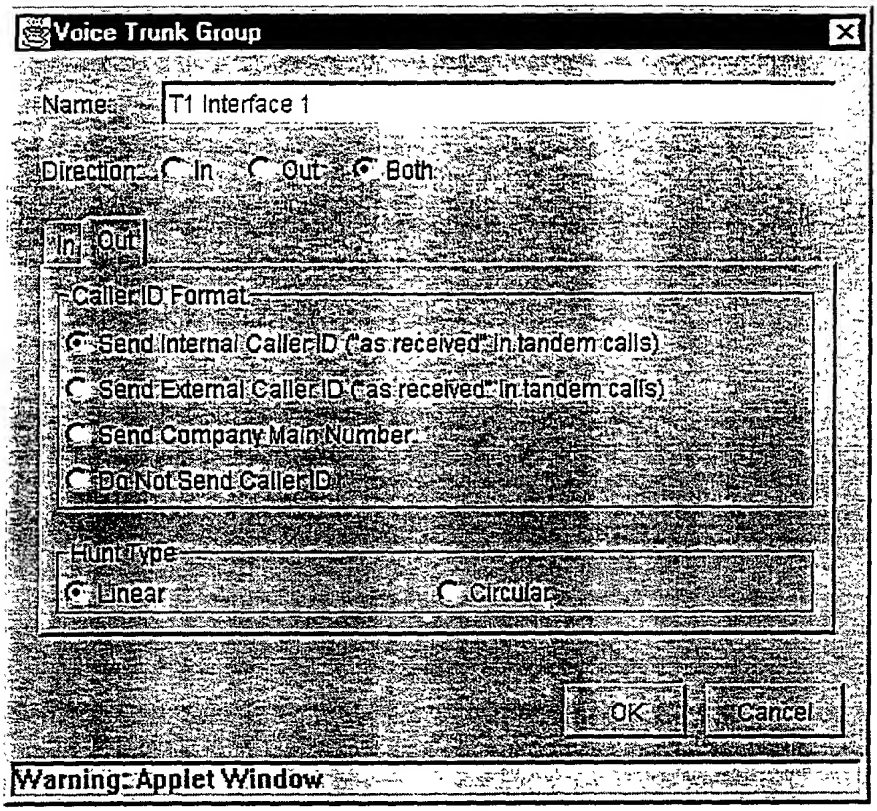

Voice Trunk Group
Name: T1 Interface 1
Direction: In Out Both
In Out
Caller ID Format
Send Internal Caller ID (as received" in tandem calls)
Send External Caller ID (as received" in tandem calls)
Send Company Main Number
Do Not Send Caller ID
Hunt Type
Linear Circular
OK Cancel
Warning: Applet Window

FIG. 43B

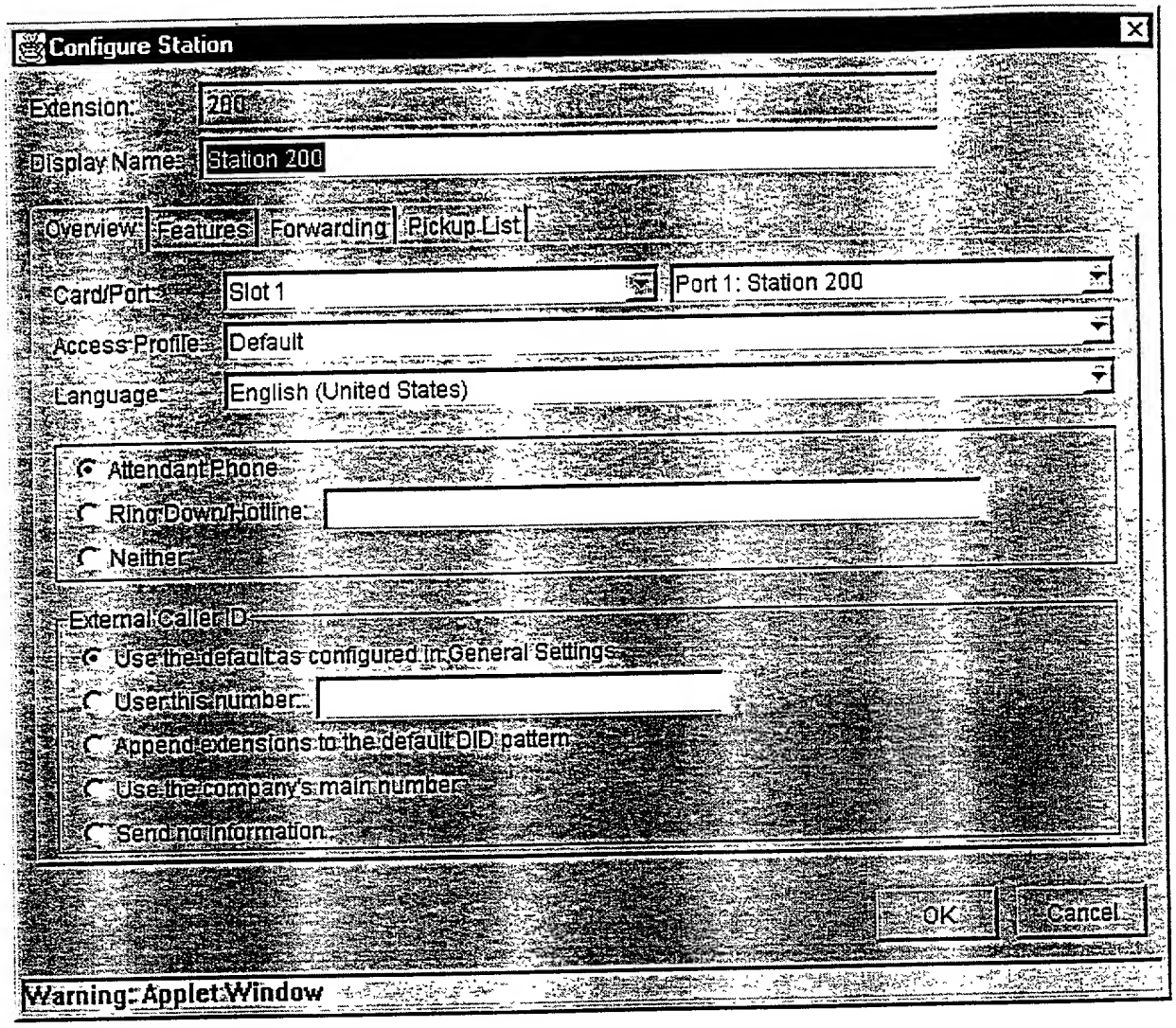

Configure Station
Extension: 200
Display Name: Station 200
Overview
Features
Forwarding
Pickup List
Card/Port: Slot 1
Port 1: Station 200
Access Profile: Default
Language: English (United States)
Attendant Phone
Ring Down/Hotline:
Neither
External Caller ID
Use the default as configured in General Settings
Use this number:
Append extensions to the default DID pattern
Use the company's main number
Send no information
OK
Cancel
Warning: Applet Window

Fig. 43c

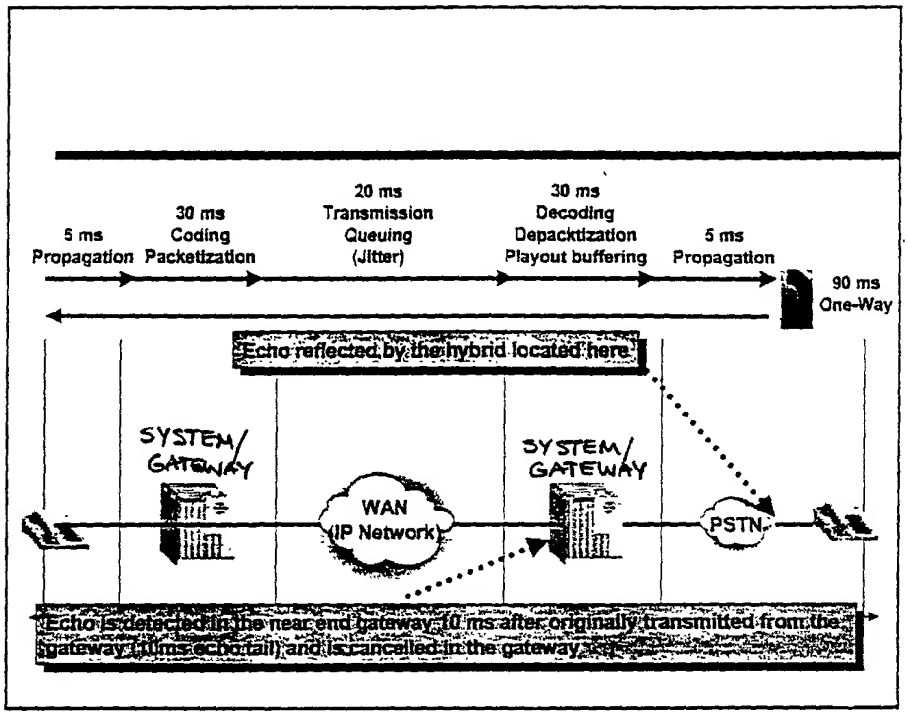

5 ms
Propagation
30 ms
Coding
Packetization
20 ms
Transmission
Queuing
(Jitter)
30 ms
Decoding
Depacktization
Playout buffering
5 ms
Propagation
90 ms
One-Way
Echo reflected by the hybrid located here
SYSTEM/
GATEWAY
WAN
(IP Network)
SYSTEM/
GATEWAY
PSTN
Echo is detected in the near end gateway 10 ms after originally transmitted from the
gateway (10ms echo tail) and is cancelled in the gateway.

FIG. 44

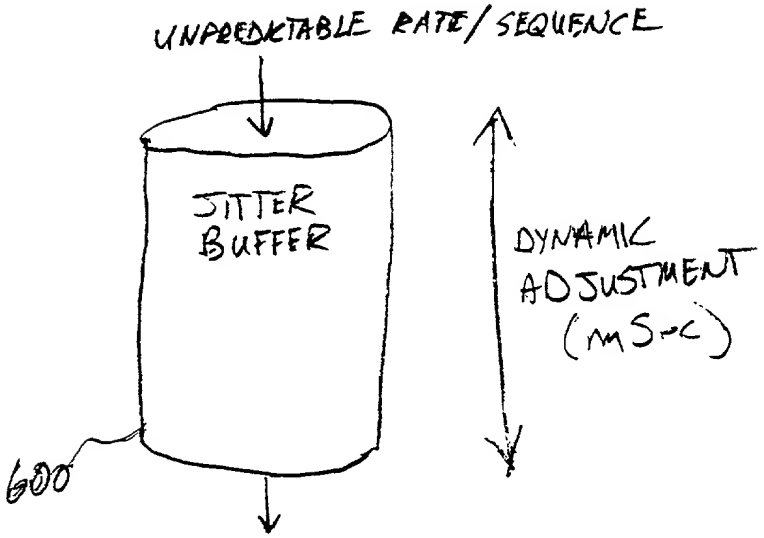

UNPREDICTABLE RATE/SEQUENCE
JITTER BUFFER
DYNAMIC ADJUSTMENT (mS-c)
600
CONSTANT RATE/SEQUENCE

FIG. 45

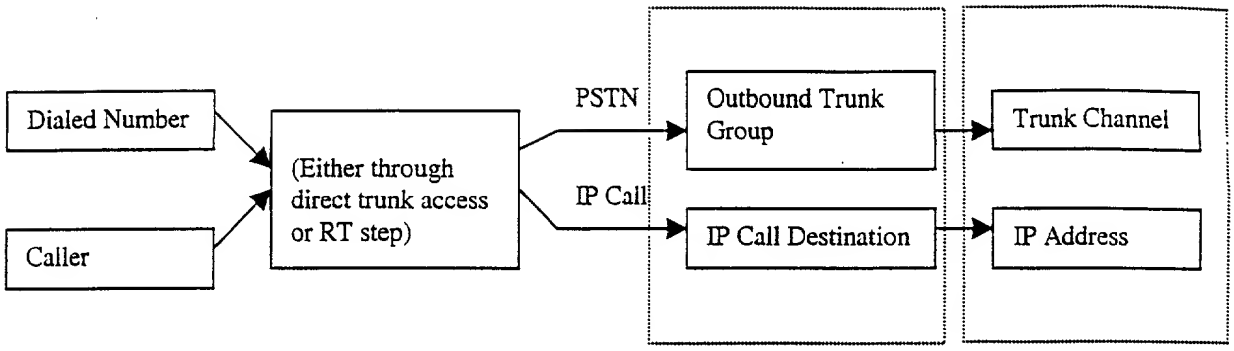


FIG. 46A

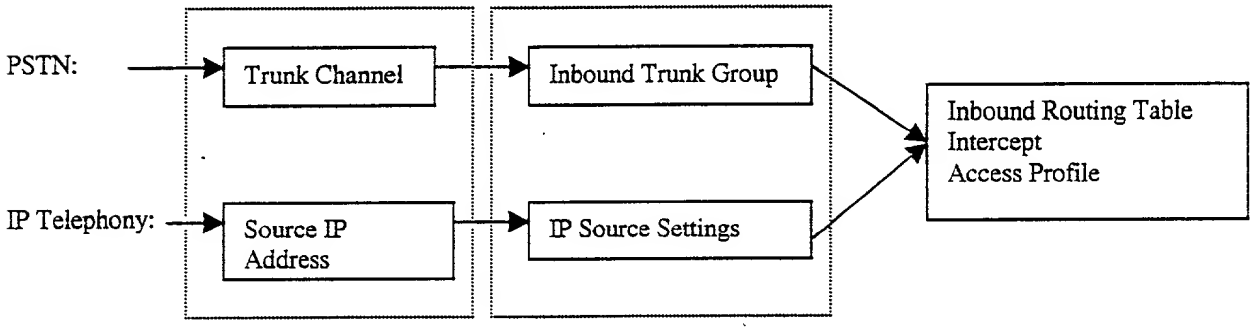


FIG. 46B

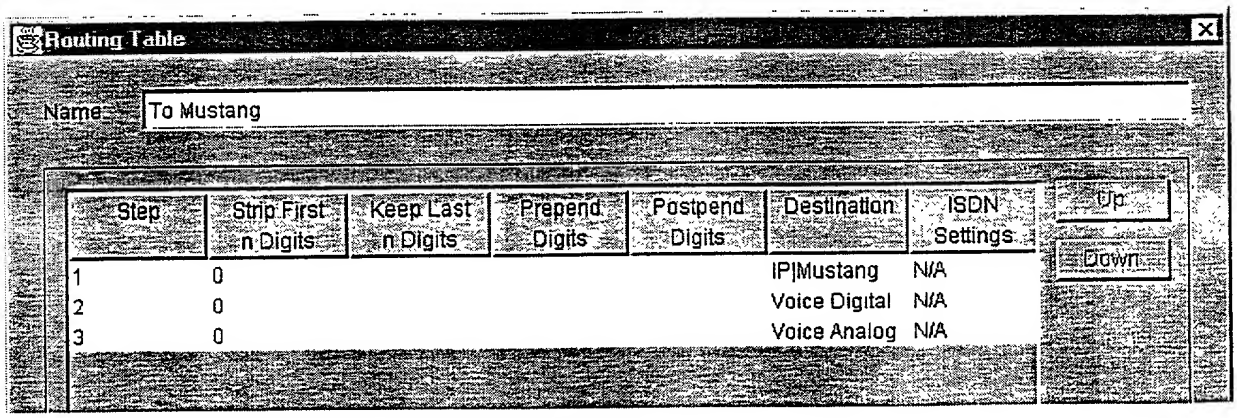


FIG. 46C

—— Extension to extension (Uniform Dialing)

····· Extension to external telephone (toll bypass)

– – External telephone to extension

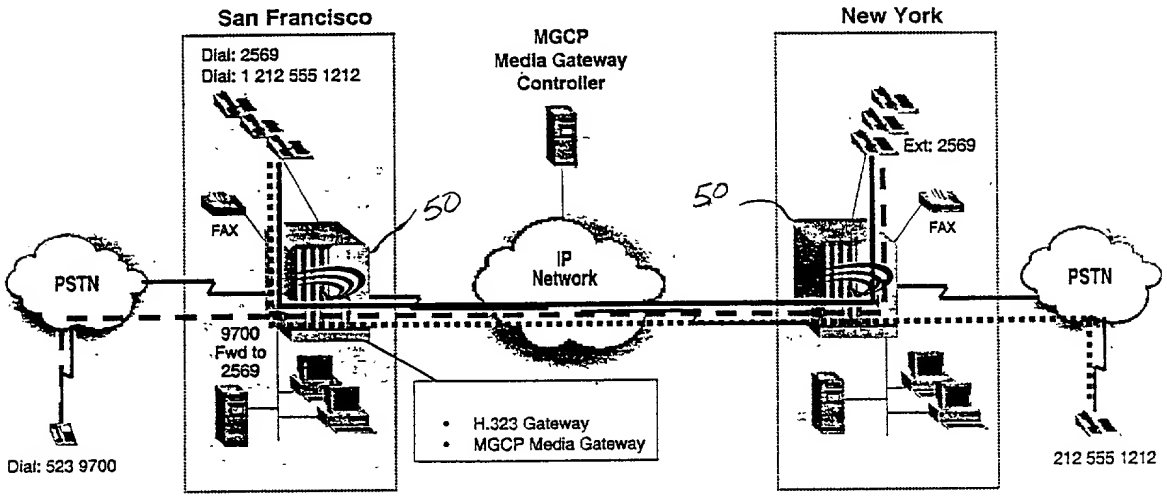


FIG. 47A

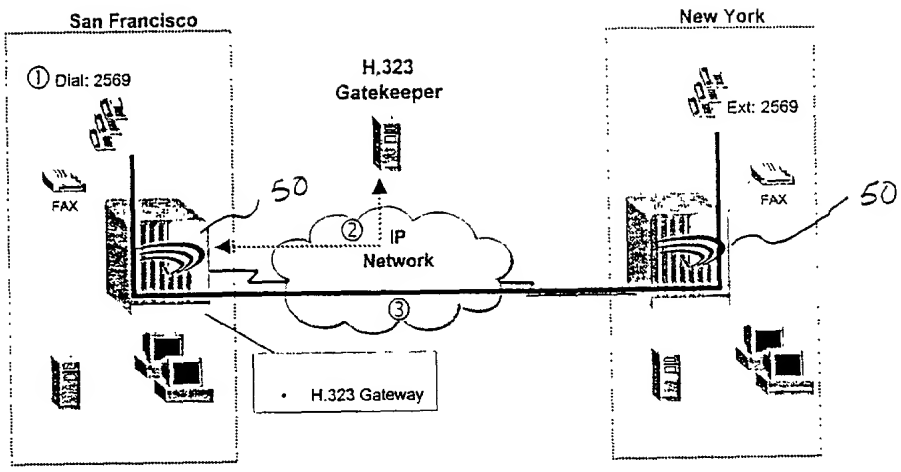

San Francisco
New York
① Dial: 2569
H.323
Gatekeeper
Ext: 2569
FAX
FAX
50
50
②
IP
Network
③
H.323 Gateway

FIG. 47B

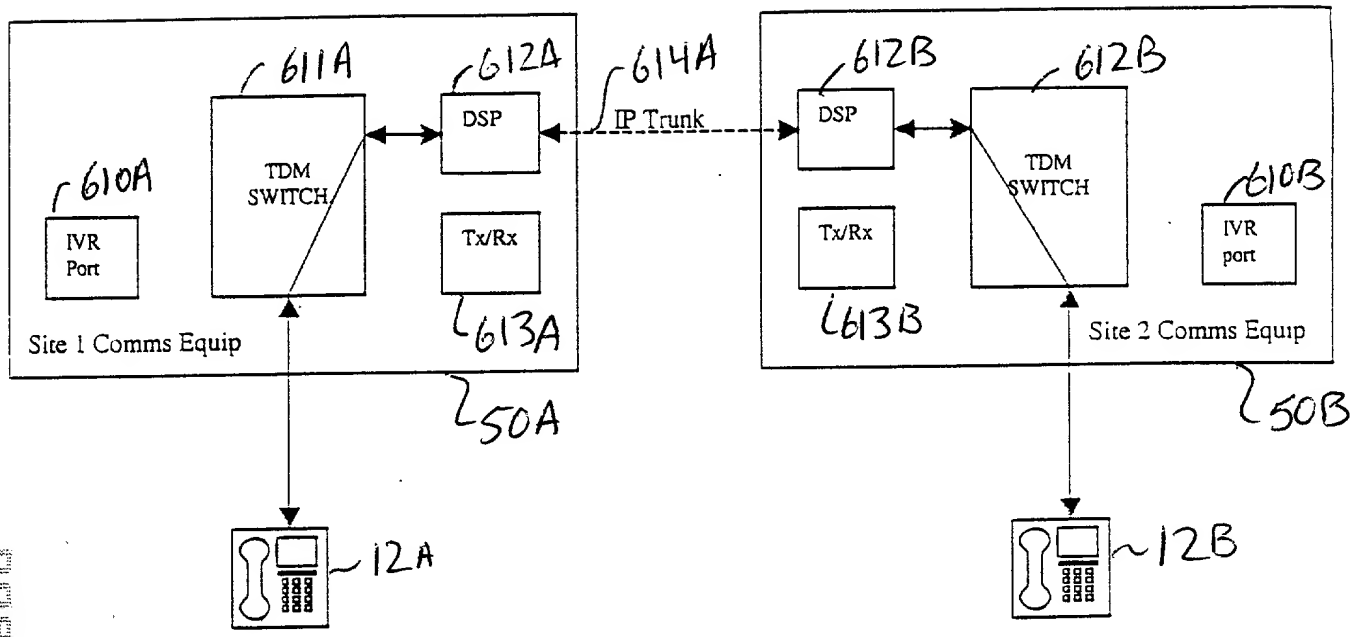


FIG. 48A

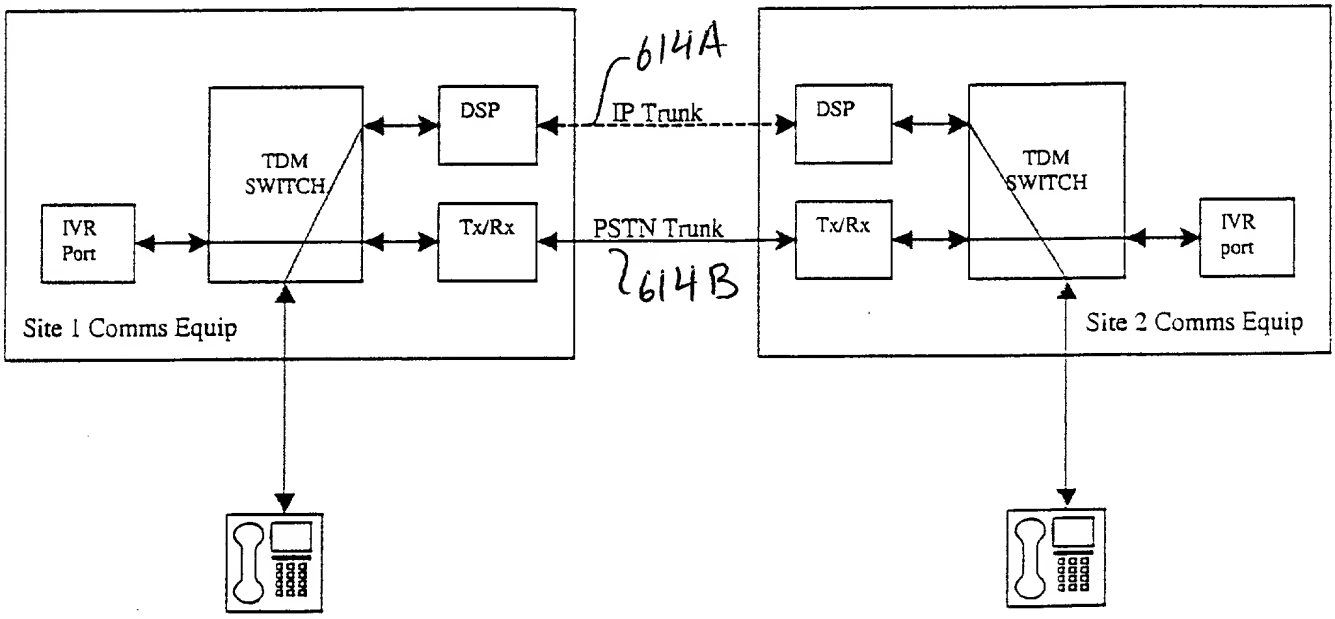


FIG. 48B

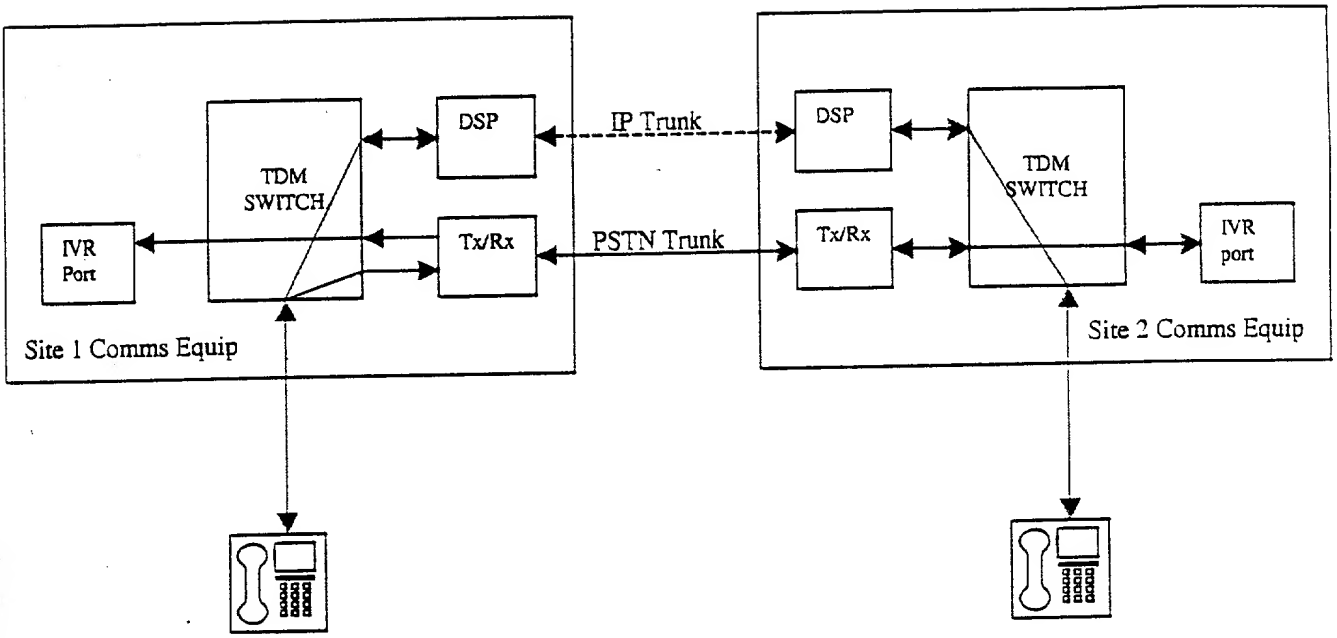


FIG. 48C

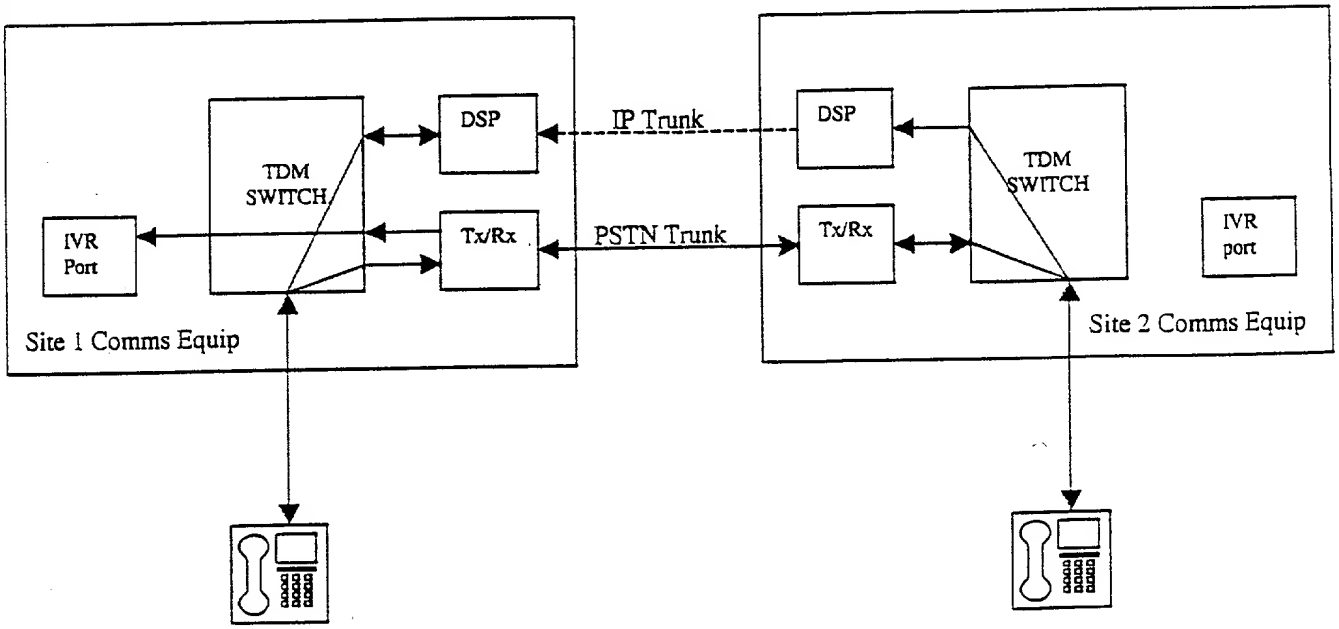


FIG. 48D

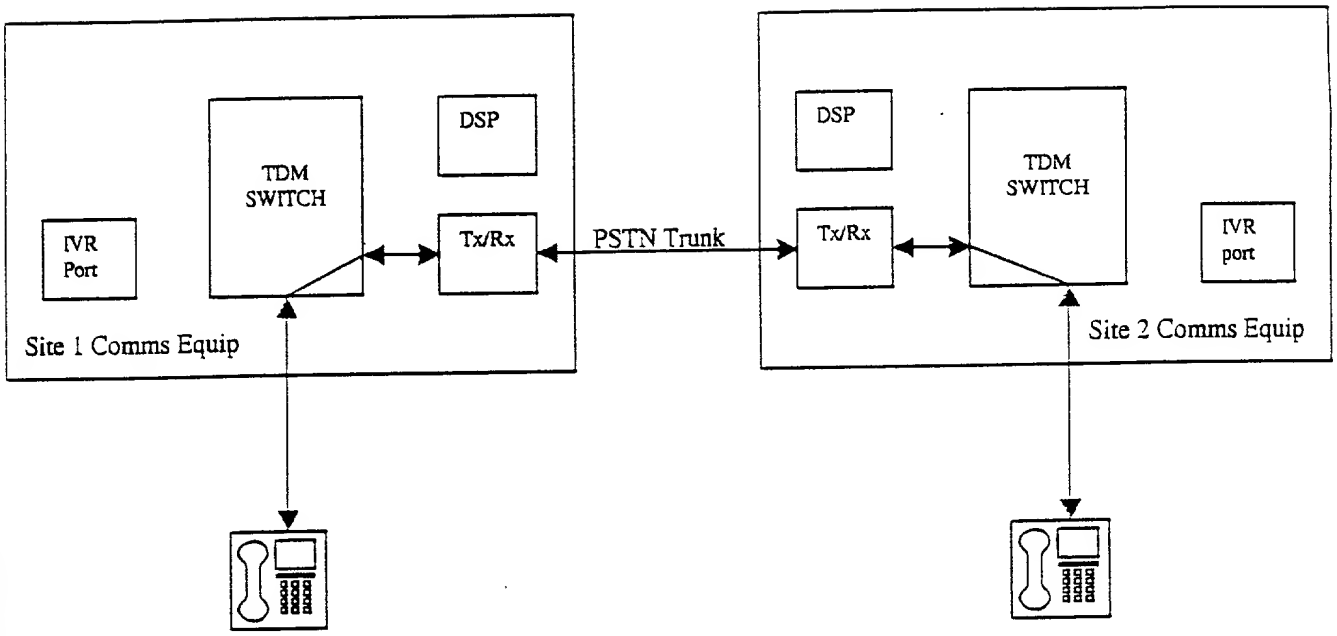

DSP
TDM SWITCH
IVR Port
Tx/Rx
PSTN Trunk
Site 1 Comms Equip
DSP
TDM SWITCH
Tx/Rx
IVR port
Site 2 Comms Equip

FIG. 48E

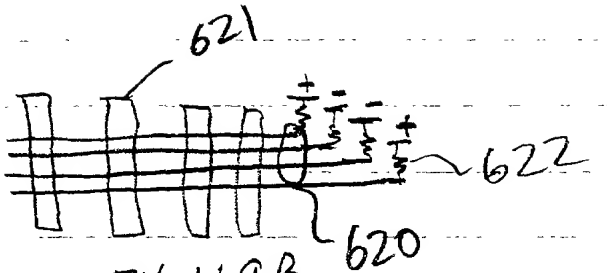


FIG. 49B

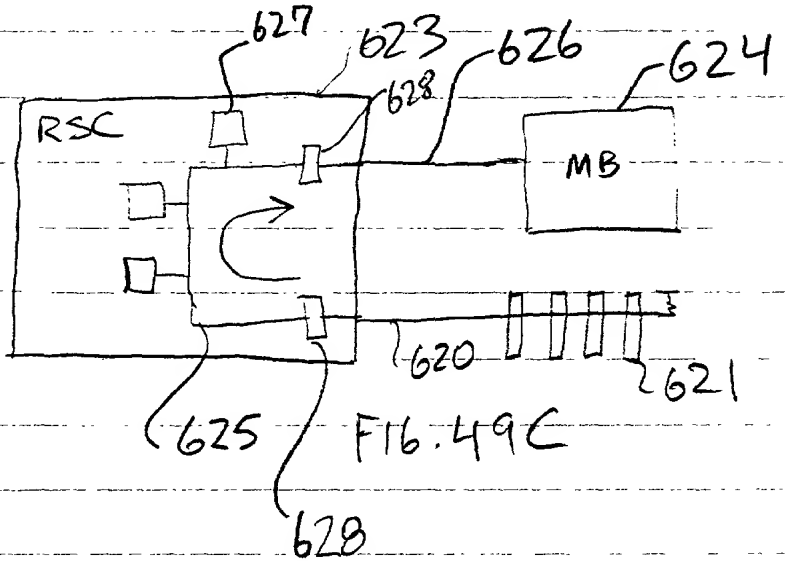


FIG. 49C

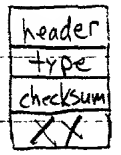


FIG. 49A

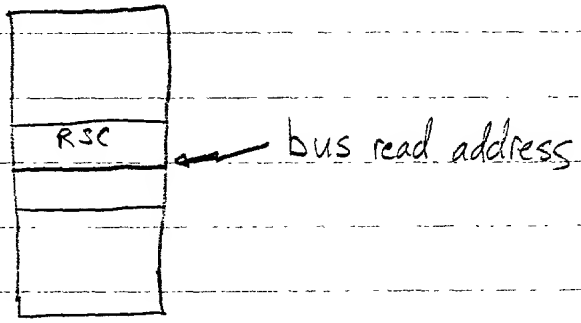


FIG. 49D